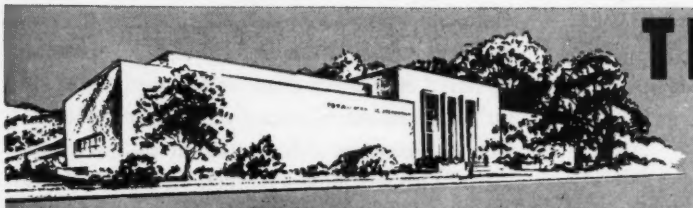

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Worker or Drone—Which Are You?

I have heard it said that if a preacher can't keep a man from going to hell in 15 minutes, the rest of his time is wasted. Therefore, I will make this editorial short and to the point.

In every medical society, you often hear the words, "This society is run by a clique." That clique is the easiest one to join I know. All you have to do is to be willing to do a little work. The greatest condemnation I know of Texas medicine is the fact that about 50 per cent of our doctors attend few if any of the regular meetings of their county medical societies. An individual doesn't have to be the president or secretary to be a worker and valuable member of organized medicine. A doctor who will attend his county society meetings and give serious thought to and suggest ideas on the problems that confront us in the advancement and protection of American medicine as we know it is making a valuable contribution.

It is a sad but true fact that a majority of the men who fail to attend their county society meetings are faithful in their attendance at their hospital staff meetings for the simple reason that they will be put off the staff if their attendance falls below a certain percentage. That is how, eventually, the hospitals will take over the practice of medicine unless the trend changes.

American medicine will stand or fall in accordance with the strength we put into our county medical societies. The men who complain the most are those who are sluggards

when it comes to working on medical problems. You will never hear a worker say, "What is Organized Medicine doing for me?"

Now go back to the title and grade yourself. Which are you, a worker or a drone? What are you going to do about it?

—F. W. YEAGER, M.D., Corpus Christi.

For Asian Influenza: Mobilize NOW

If the public reaction to the threatened Asian influenza epidemic is to be an orderly procession to private physicians for immunizations, doctors must begin now to prepare for this demand. There will be a great clamor for inoculations; as always, there will be the cry, "It ought to be free!"

Now is the time to make statements through the local press and radio about how people in your area may obtain vaccine, and at what cost. Doctors should discuss and study this question at county society meetings, come to an agreement, and make public their plans. Explain that the vaccine costs money, that giving injections takes precious time, but that the doctors are willing to perform this service for a reasonable fee. Of course, doctors probably will want to continue existing practices of providing inoculations free for the truly indigent. Such action, if taken before the public panics at the word "epidemic," will result in better understanding and better patient care.

The President of the Texas Medical Association, Dr. Denton Kerr, Houston, in a statement to the press September 7 said that steps are being taken to assure Texans of the best possible care in the event of an Asian influenza epidemic. He emphasized that about twelve and a half million doses of vaccine are expected by December 1. In his statement, Dr. Kerr said that because of the limited vaccine supply, first preference should be given to persons whose services are imperative for the care of the sick and for maintenance of essential community and governmental services.

A resolution, introduced by the Board of Councilors and adopted by the Executive Council of the Association at its meeting September 8, stated that since there was considerable agitation for mass vaccination against Asian influenza and that a continuation of this movement without direction from the Association might result in confusion similar to that resulting from the poliomyelitis vaccination program, influenza vaccine should be administered in accordance with the established doctor-pharmacist relationship. It was further resolved that no patient be denied this or any other medical care because of economic distress, and that a committee be appointed to study the problem and offer direction in its solution.

This step is a starting point for the medical profession to work from. If good planning and coordination are begun at the outset of the epidemic, it will avoid some of the problems and rhubarbs that developed with poliomyelitis vaccinations.

About the disease itself—the virus belongs to the A group, but persons who have been infected previously with group A or A_1 virus have no immunity against the Asian strain. Although there is the distinct possibility that this new virus may cause a vicious epidemic with lethal qualities comparable to the terrible 1918-1919 pandemic influenza, the probabilities of anything with such killing power are lessened by the current use of antibiotics. There have been to date approximately 20,000 to 25,000 cases of influenza caused by the Asian strain in this country; it is highly contagious and conceivably could spread across the country in 4 or 5 weeks with a mortality rate of 2 per 1,000 and an attack rate of 10 to 20 per cent. Fever, body aches, sniffles, and cough are usual symptoms.

About the vaccine—an August 30 issue of the *American Medical Association Washington Letter* reports that the vaccine will be allocated to states under a voluntary system according to population (a September 6 release states that Texas is in line for 5.2 per cent of all vaccine

produced). It is packaged in 10 cc. vials (10 immunizations) and is a killed vaccine preserved in 1:10,000 sodium ethylmercury thiosalicylate. It should be refrigerated and will retain potency for about 18 months. The vaccine is prepared from the allantoic fluid of chick embryos infected with the virus; for this reason, persons allergic to eggs, chicken, or chicken feathers may have unfavorable reactions. About 10 days to 2 weeks is required to develop immunity after having had the vaccine, and the length of immunity is not known. The vaccine is about 70 per cent effective.

Already the lay press, as well as medical publications, are drawing conclusions and commenting editorially about the Asian influenza and the part the medical profession will play in its control. *The Texas Businessman* in its August 19 issue said, "Flu epidemics will mean an excited, emergency-like public attitude. Critics of the medical profession should have a field day, with public opinion tilted a bit in their favor." *Life* magazine had a nine page spread on the subject covering the mobilization of drug companies in manufacturing vaccine, the effects of the disease in eight foreign countries, the process of making vaccine (in this section it was mentioned that list price for the vaccine is 66 cents per dose), facts about the flu, and picture studies of the first effects of the disease on the nation.

The *AMA Washington Letter* has reported that President Eisenhower is asking half a million dollars for use by the Public Health Service to combat Asian influenza, and that if a critical emergency develops, the Department of Health, Education, and Welfare would be authorized to draw from other appropriations $2 million to call back 100 reserve health officers and to provide supplies. The White House spokesman said that the federal government itself does not propose to buy vaccine.

Dr. Henry A. Holle, State Health Commissioner, Austin, has issued the following comment:

> We are somewhat fortunate in being ahead of a possible outbreak of the disease. Representative groups have been called and are working together to try to minimize the impact of the epidemic. The American Medical Association is joining the Public Health Service in an educational program for the vaccine and in preparing for medical care that will be necessary following the illness. They are giving complete support to the program. The American Hospital Association has already advised all their members to make plans for a probable outbreak. Obviously, with such large numbers of people affected, only those with complications should be admitted to hospitals and routine cases will of necessity have to be cared for at home. The American Academy of Pediatrics and the American Academy of General Practice have actively cooperated in the program. All the voluntary associations such as the American Red Cross, National Tuberculosis Association, and others are lending full cooperation to the program. Through cooperative efforts, we hope to at least minimize the occurrence of the disease.

Like organized groups at the state and national level, medical societies at the county level will want to make careful plans and begin wholehearted cooperation with other local groups so that if an epidemic does strike, the public will get the best possible care with the least possible cost and confusion.

Something Missing?

The fact that the transactions and membership list of the Woman's Auxiliary to the Texas Medical Association have been missing from the *Journal* this year is no indication that the Auxiliary is less active than usual. This material, because of its special significance to the 5,162 members of the Auxiliary, has been issued as a separate booklet for direct distribution to them. The booklet details the splendid projects in health education, community service, and good relations for the medical profession carried on during the year 1956-1957 by the Texas Auxiliary and contains the names and addresses of current members. Interested physicians may obtain the booklet upon request.

As the publication reporting past activities

is distributed, the Auxiliary is at work on this year's program. Officers and committee chairmen of the state group plus presidents of the 115 county units are getting together for an intensive workshop session and Executive Board meeting in Austin September 25-26 as the fall and winter season—traditionally the season of best organizational work—gets under way.

"Never underestimate the power of a woman" has become a byword. Nevertheless, there is much truth in its application to the women who make up the medical auxiliaries, and this power has been applied successfully to the advantage of the medical profession. Every doctor should acquaint himself with this aspect of the professional organizational picture.

Wanted: New AMA Members

Wanted: 309 Texas physicians—to join the American Medical Association.

For a perfect membership record, Texas should have approximately 500 new AMA members to add to the 6,691 present Texas membership in AMA. But 309 additional AMA members from Texas would be significant, for they would give the Texas Medical Association added strength on the national level in the form of an eighth delegate to the House of Delegates of the American Medical Association. It is anticipated that normal growth should bring in approximately half this many new members by the first of the year, which leaves a very narrow margin between Texas' present seven delegates and its possible eight delegates.

Texas physicians exert a big influence in helping to work out the problems and to set the policies of medicine on a national scale. A fellow Texan, Dr. F. J. L. Blasingame, soon will become the chief executive officer of the AMA, and it will be a privilege to every Texas doctor to cooperate to the fullest degree with him as he leads all physicians in solving their problems.

The Texas delegates and alternate delegates to the national medical organization are in the midst of a membership campaign, aimed at increasing the number of Texans in the AMA to at least 7,000, which is the dividing line for Texas' increased representation. The national President, Dr. David B. Allman of Atlantic City, has written each member of the Texas Medical Association who is not a member of the AMA but is eligible for active membership, pointing out that AMA members constitute 90 per cent of the practicing physicians in the country and that the organization serves as the official representative of the medical profession. The advantages of belonging to the Association being too numerous to do more than mention, Dr. Allman enclosed a brochure briefly summarizing the AMA in action, and a reprint of "Things of Good Report," an article by Dr. Blasingame which appears in the August, 1957, issue of the *Texas State Journal of Medicine,* also was sent to them.

Dr. Milford O. Rouse of Dallas, immediate past President of the Texas Medical Association and chairman of the Texas delegation to the AMA, and other delegates and alternates are personally encouraging nonmembers, by letter and by telephone, to join the ranks and to fulfill their responsibilities to the profession, the public, and better health.

The relatively few Texas nonmembers of the American Medical Association should consider the many great advantages of belonging—for example, the scientific contributions; the postgraduate educational efforts, primarily a clinical meeting and the biggest annual medical meeting on earth; the numerous publications, including the weekly *JAMA* and nine monthly specialty journals—and join the AMA now by sending a check to the secretary of their local county medical society. In addition, they owe it to themselves, their patients, and their profession to carry their part of the load in supporting the organization which has done so much to keep the standards of medical care high and to preserve the time proven methods of medical practice.

President's Page

WORDS BETTER LEFT UNSPOKEN

A careless statement to a patient by a well meaning physician resulted in an enormous suit being filed against a fellow physician. The defendant happened to be a partner in a large, successful group, and so was the person who made the careless statement. The plaintiff won the suit. The economic status as well as the reputation of the entire group was virtually ruined. A series of lawsuits followed in that state, and within 2 years the protective insurance rates more than doubled. Today, and for years to come, every physician in that state must continue to pay for one man's carelessness. One or two simple questions and a little better understanding of the facts in the case might have prevented this unfortunate chain of events.

A few days ago I heard a good friend of mine bitterly denouncing Blue Shield for not paying his entire bill in a Medicare case. He was arousing his audience and getting many of his listeners to agree with him. After he had had his say, it was explained to him that Blue Shield accepted the responsibility of handling Medicare as a favor to the physicians of Texas and then only after the House of Delegates in special session unanimously requested Blue Shield to do so. It was further explained that the fees were set in Washington and Blue Shield is forced by law to abide by them or suffer the consequences. No group of people can be more dedicated to the task of helping sick people and physicians than the employees of Blue Shield. No group has done more to help maintain the private practice of medicine than they. Yet, the staunch friends of Texas medicine and the free enterprise system were being maligned by a person for whom they have been diligently working for years. A short letter of inquiry would have resulted in a courteous explanation of the situation.

Within the past week, I heard a fellow physician attack the Texas Medical Association for trying to dictate to him the kind of insurance he should carry. The truth is that for many years letters poured into

the office of our Association from its members requesting that a policy or a company be recommended because the writers were being constantly worried by insurance salesmen from various companies, each claiming that his company and his policy were the best. Finally a committee of our best talent was asked to study the policies of every leading company in America and make such recommendations as they believed would be in the best interest of the doctors of Texas. Hundreds of man hours were spent getting the facts and figures together. Finally, a half dozen of the best policies of the leading companies were tabulated in detail and submitted to the Board of Trustees for a final selection. After many long hours of study the Board selected the one which it thought would best serve the physicians of Texas. It was merely recommended to the membership for their acceptance or rejection. No one was told that he must buy it. In spite of all that had been done, the entire Texas Medical Association was being denounced for its "autocratic methods."

No recommendation ever came from the state, district, or county level without a thorough study and appraisal by the appropriate committee. These unselfish committeemen work long hours, forego personal pleasure, and spend hard earned money in a never ending effort to make ours the best medical organization in the world. They welcome constructive criticism because they realize that it is the greatest asset to a democratic society. Deserved praise is the greatest stimulus that can be given to the many unselfish workers who are constantly fighting our many battles. May we all be more generous with both and in every instance do our utmost to be thoroughly familiar with the subject about which we speak.

Denton Kerr

ORIGINAL ARTICLES

Is Radium Still Needed in Cancer Therapy?

CHARLES L. MARTIN, M.D.

Dallas, Texas

DURING the past decade much of the activity in the field of therapeutic radiology has been directed towards building bigger, more powerful generators of radiant energy and towards devising substitutes for radium. The enthusiasm of the technical experts has become so great that some of them have come forth with the statement that radium is no longer needed.

Dr. Charles L. Martin, director of the Martin X-Ray and Radium Clinic, presented this paper for the Section on Radiology of the Texas Medical Association at the annual session April 30, 1957, in Dallas.

Although radioactive isotopes are popular, low intensity radium sources still constitute perhaps the best form of therapy for accessible neoplasms. Illustrative cases and statistical studies from the author's experience, a comparison of results obtained with radium needles and radioactive cobalt needles, and the advantages and disadvantages of other types of interstitial therapy are presented.

The evaluation of new devices must rest squarely on studies of clinical results, and such studies are now appearing in the medical literature. Let us first examine some of the information which has been provided concerning the clinical value of the new expensive sources of external irradiation such as the cobalt bomb, the supervoltage x-ray machine, and the betatron. These machines provide irradiation beams having wave lengths similar to those produced by well filtered radium. They can be projected into the body so as to produce little or no skin reaction, but the treatment of an internal neoplasm necessitates the irradiation of a volume of tissue considerably larger than the tumor to be treated and usually such volumes have spherical, cylindrical, or ovoid shapes. This fact constitutes the chief disadvantage of the method because many of the normal tissues which must of necessity be included in such volume patterns will not tolerate the doses needed for the complete eradication of a neoplasm.

It has been known for many years that a dose of 6,000 to 7,000 gamma roentgens administered in seven or eight days with multiple low intensity radium sources will control most squamous cell carcinomas and some adenocarcinomas. However, it was soon found that a similar procedure carried out in such a short period of time with the new machines was disastrous to the normal structures when adequate volumes of tissue were treated. An attempt was then made to do away with such adverse complications by extending the time of treatment to three or four weeks and then to six or seven weeks. Although this procedure reduced the number of sequelae, it must be remembered that the biological effect of 6,000 r given in six weeks is less than the effect of the same dose given in one week and it may fall completely below the cancerocidal level. Even if this technique were effective, Fletcher[4] has shown that it may be dangerous when applied to the whole pelvis so as to deliver 6,000 r at the pelvic walls using rotation therapy because it produces "small intestinal diarrheas, at times bloody." He advocated doses of 4,500 to 5,000 r but did not state that they are cancerocidal. In an attempt to give cancerocidal doses to the whole pelvis he administered 7,000 r in seven weeks and 8,000 r in eight weeks to patients with advanced cancer of the cervix, but as might be expected these patients died with small bowel necroses. His conclusions indicated that radium still constitutes an important part of his cervix techniques.

Williams and Horwitz[19] recently have reported a series of patients with cancer of the rectum in which an attempt was made to deliver a dose of 6,000 r to rather large volumes of tissue in six weeks with 1,000 kilovolt equipment. In 50 per cent of these cases it was necessary to modify or interrupt the treatment because of bladder and bowel irritations, malaise, nausea, and vomiting. In some of the others, late complications such as rectovaginal fistulas, chronic radiation necrosis, and fibrosis and stenosis of the rectum were observed.

Friedman[6] has made a rather intensive study of the effects of supervoltage roentgen rays on internal organs. He found, for instance, that in irradiating the upper left abdominal quadrant for periods varying from 50 to 75 days, the stomach received serious damage in 25 per cent of the cases receiving 3,500 to 4,400 r and 50 per cent of the cases receiving from 4,500 to 5,500 r. He also reported a serious radiation nephritis in cases receiving 2,300 r to both kidneys. As a part of his discussion in a recent symposium[3] on supervoltage therapy, he stated, "we are now hearing that many people . . . in spite of the knowl-

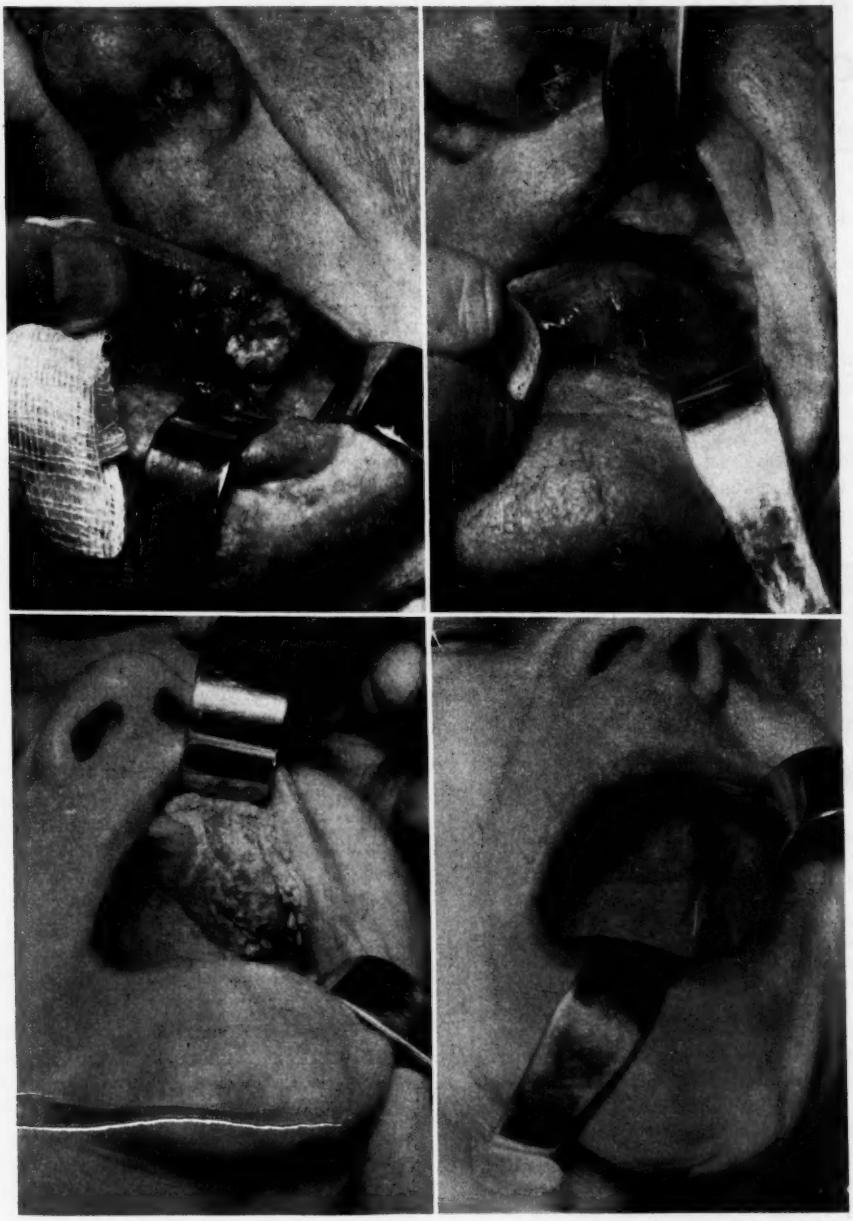

Fig. 1. Large squamous cell carcinomas of the lateral border of the tongue and the hard palate before and six weeks after the implantation of low intensity radium needles. Note the perfect healing of the mucous membrane of the hard palate where radium needles were used in contact with bone.

edge of our experience are beginning to encounter these radiation injuries of the gastrointestinal tract not only here but also in England."

The physicists have stated that bone absorbs a relatively small quantity of the rays generated in the supervoltage range and that this fact should make it possible to treat carcinomas in the mouth without the production of bone damage. However, clinical observation does not seem to support this supposition. Friedman stated that "my experience has been that there has been no decrease in the incidence of bone necrosis with supervoltage radiation," and Watson said, "I have little to add except to support Dr. Friedman in his statement about bone necrosis." Friedman and his associates, who use the cobalt 60 bomb, stated, "with a total dose of 7,000 r improvement was obtained, but the tumor persisted when the involvement was in the anterior two-thirds of the tongue." Since cancer of the tongue can be treated successfully without bone damage using point doses ranging from 6,000 to 12,000 r administered with low intensity radium needles, supervoltage techniques apparently are relatively inefficient in this field.

Radiologists have known for many years that large doses of radiation produce marked fibrosis of lung tissue and that this type of fibrosis can completely abolish function. This complication has been observed in patients treated with supervoltage equipment for carcinoma of the esophagus, bronchogenic and breast carcinoma, and mediastinal lymph nodes, and Ivan H. Smith in discussing a paper by Burkell and Watson[1] on cobalt bomb therapy stated, "I am disturbed, yes, harassed, by the incapacitation occasionally produced by pulmonary fibrosis."

The experienced radiologist who is familiar with the risks involved can treat lesions within the body with supervoltage equipment by reducing the volume irradiated, extending the time of treatment, and reducing the total dose so as to avoid irreparable damage to normal tissues. However, it is important to determine whether the clinical end results obtained under these conditions show significant improvement over those obtained with radium and conventional x-ray machines.

Carpender,[2] who has all of the newer types of supervoltage equipment at his disposal in the Chicago Tumor Institute, has said, "It will by no means supplant 250 Kv. therapy or radium, but should evolve another tool of limited usefulness in the hands of the careful practitioner of radiotherapy." Advocates of the newer methods have held out great hope for the successful treatment of cancer of the bladder. Watson,[17] who has had all types of equipment available in his clinic in Saskatchewan, Canada, reported that 3 patients treated with external radiation have obtained good results but said, "Unfortunately, this is not true of the majority of cases of cancer of the bladder thus treated by us" and later, "In regard to the question of survival, I imagine that the survival rate would be very little improved by supervoltage therapy." Friedman has taken a more positive stand when, in discussing the treatment of cancer of the bladder, he said, "Among an equal number of cases receiving 2,000,000 volt therapy and intracavitary radium or cobalt the results with intracavitary radium are superior."

When asked whether certain lesions should show a better response to supervoltage therapy, Friedman replied, "It is my clinical impression that the quality of radiation delivered by 200 Kv. is much closer to

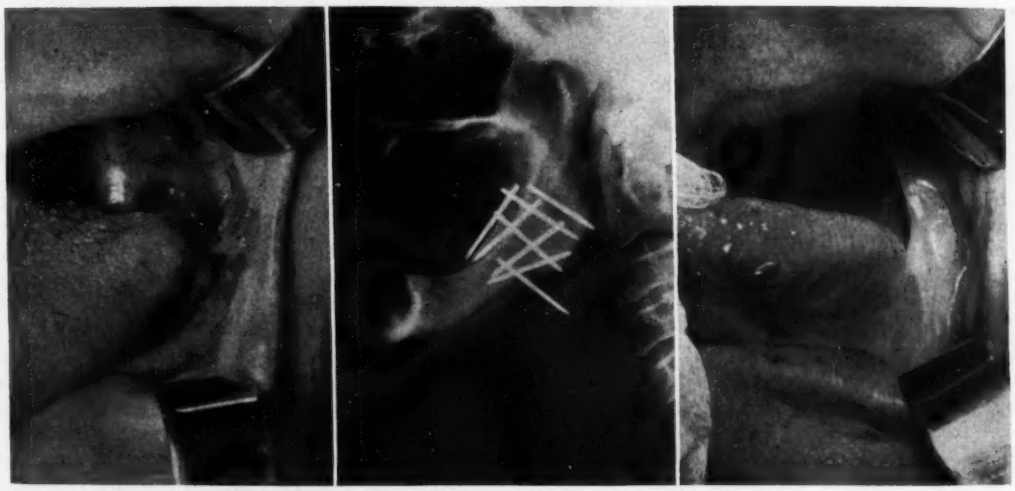

Fig. 2. Squamous cell carcinoma of the left base of the tongue and anterior pillar before and three months after the implantation of two layers of low intensity radium needles.

the optimum efficient relative biological effect than supervoltage radiation." Later he said, "In my own experience, there is no improvement in the results in carcinoma of the larynx with the use of supervoltage radiation." Constance Wood (quoted by Way[18]) summed up the situation very well when she said, "The dream of the radiotherapist in former decades of obtaining an x-ray beam which would deliver a high dose to a deep seated tumor without damaging the skin has now been achieved. With this, however, has come the realization that improved technique will not materially increase the cure rate of cancer."

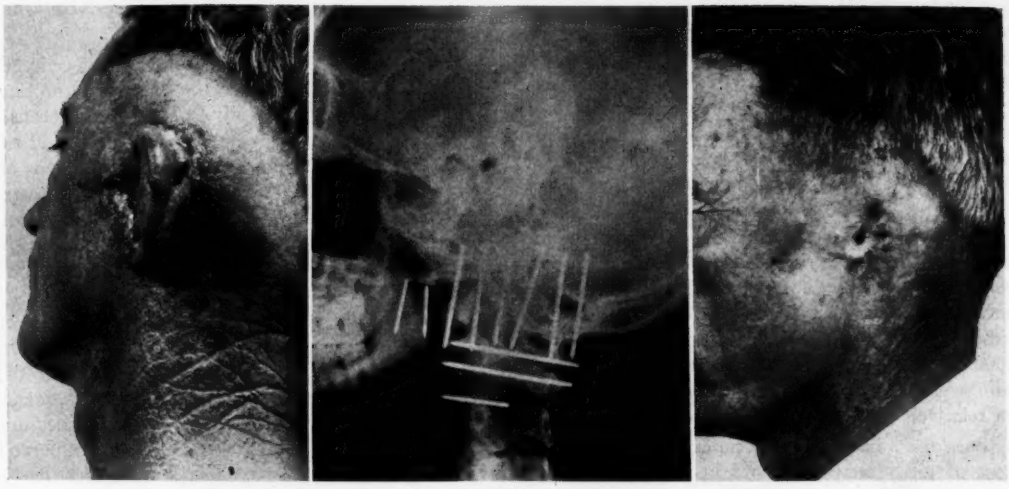

Fig. 3. Advanced squamous cell carcinoma of the left ear before and nine months after the removal of the cartilagenous portion of the ear and the implantation of a layer of low intensity radium needles into the residual malignant tissue. The patient has remained well for eight years.

INTERSTITIAL THERAPY

It is my opinion, based on some 25 years' experience, that the implantation of low intensity radium sources provides the most efficient and the safest radiological method available for the treatment of accessible neoplasms. Since this technique was first used in France by Regaud in 1920 it can hardly be looked upon as new, but it has not been generally adopted in this country. Instead, most interstitial therapy has been carried out with radon seeds, which were perfected by Failla in 1926. An article was published by me[7] in 1932 detailing the advantages of low intensity radium needles over radon seeds. Chief among them is the more even distribution obtainable with longer implants which can usually be placed accurately in a preconceived pattern. When roentgenograms show an uneven distribution, the needles can easily be readjusted, but once seeds are implanted their positions are fixed and an irregular distribution cannot be corrected. The relatively thin filters used with seeds (0.3 mm. wall thickness) allow the emission of some beta rays, which may produce undesirable normal tissue damage particularly in bone. Another undesirable feature is the permanent retention of the seeds in the implanted area and on occasions they have been known to work out of intraoral tissues and be aspirated. Some have contended that the rapidly decreasing intensity of radon (half life 3.8 days) is a disadvantage because the cells do not receive the constant intensity of radiation obtained with radium.

More recently, small fragments of radioactive gold 198 encased in thin shells of inactive gold have been recommended for interstitial therapy. Since radioactive gold 198 has a half life of only 2.7 days and since the fragments are left in the tissues permanently, it is evident that they have most of the disadvantages listed for radon seeds. Some have advocated the injection of radioactive colloidal gold directly into malignant tumors and the surrounding structures. This substance is a liquid which gives off some gamma rays, but most of its output consists of beta rays, which produce severe reactions and are absorbed by a few millimeters of tissue. It has been used with some success in cancer of the prostate and parametrial extensions from cancer of the cervix. However, its chief disadvantage seems to lie in the inability of the operator to obtain a uniform distribution of the injected material, particularly when the tumor tissue is hard. It was thought, at first, that the material would be taken up by the lymphatics

and deposited in the lymph nodes in quantities sufficient to destroy metastatic deposits. However, experience has shown that metastatic carcinoma does not take up colloidal gold, and for this reason the method has been disappointing. The injections have also produced some troublesome sequelae such as rectal ulcerations and painful sciatica resulting from deposits of the radioactive material placed near the large nerve trunks in the pelvis.

Small rods of radioactive cobalt 60 encased in hyperchrome steel needles having a wall thickness of 0.23 mm. can be substituted for radium needles. The beta rays are filtered out by the steel shell, and the gamma ray output is similar to that of radium. However, the half life of cobalt 60 is 5.3 years and dosage calculations are constantly changing. I have produced good clinical results with these needles, but since the treatment time steadily increases, one is soon inconvenienced by the necessity of removing them in the middle of the night if proper dosages are to be obtained. Small fragments of cobalt 60 encased in pliable hollow nylon threads have proven useful in the implantation of carcinomas growing on curved surfaces such as the bladder wall. However, the nylon rapidly becomes brittle and is easily broken after it has been used a few times. It is extremely difficult to remove a tiny fragment of radioactive cobalt left in a bladder tumor when a thread is broken, and such mishaps constitute a serious disadvantage unless new threads can be made up for each implantation.

The half life of radium is 1,690 years, and the intensity of its energy output changes so little in one person's lifetime that it can be assumed to be constant. It is, therefore, possible to duplicate good results with ease when satisfactory techniques have been established, and radium needles still seem to provide the best medium available for interstitial therapy.

CLINICAL RESULTS

In selecting the best plan of treatment for a given neoplasm one should always utilize that technique which produces the greatest number of five year survivals with the smallest number of sequelae. The advocates of supervoltage equipment stress the mild skin reactions and the minimal radiation sickness produced as important advantages. However, low intensity radium implants placed inside the body produce no skin reactions and very little radiation sickness.

They are used to the greatest advantage in carcinoma of the skin, lip, tongue, alveolus, floor of the mouth, cheek, tonsil, oropharynx, metastatic cervical nodes, and uterus. However, they can be used with

Fig. 4. Massive node metastases in the right side of the neck secondary to a carcinoma of the tonsil. The primary lesion was implanted with low intensity radium needles and the cervical lesion received roentgen-ray therapy plus a radium needle implant. The scarred area in the neck shown in the central photograph was removed at three months and revealed no evidence of cancer. The photograph on the right shows the appearance of the neck at the end of six years when the patient was symptom free.

some success in cancer of the bladder, breast, prostate, and any other such lesion which can be properly implanted. Low intensity radium techniques have been described in previous articles,[8, 10] and they will not be described here. Suffice it to say that success depends on a painstaking approximation of the radioactive sources to all of the malignant tissue using patterns designed to eradicate all malignant cells and protect normal tissues.

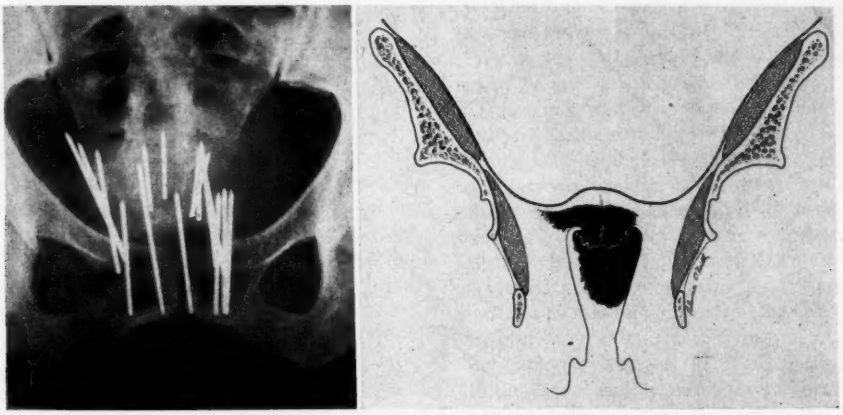

Fig. 5. Carcinoma of the cervical stump with extension into the right parametrium and posterior vaginal wall treated with low intensity radium needle implantation, as shown in the radiograph. The patient has remained well for six and one-half years.

If the newer methods are to replace radium therapy, they must produce better results and it may be worth while to list a few clinical studies from our clinic as a baseline for comparison.

In 1948, a series of 57 cases of advanced cancer of the ear treated by implantation of a layer of low intensity radium needles into the residual tumor, after the involved cartilage had been removed by electrosurgery, was reviewed. The lesions were said to be advanced when they involved the entire ear, when invasion was observed in the auditory canal or the surrounding structures, or when metastatic lymph nodes could be felt in the cervical region. The involved nodes were treated entirely by an irradiation technique which will be described later. The survey showed that only 9 patients were known to have died of cancer; complete primary healing was observed in 63 per cent while 51.4 per cent had remained well for periods varying from three to seven years.

Cancer of the oral cavity is particularly well suited for radium needle therapy, and a survey[10] of 171 consecutive cases involving the cheek, tongue, alveolus, floor of the mouth, and soft and hard palate treated from 1930 to 1944 was published in 1949. Complete primary healing was observed in 63.7 per cent, and a five year cure rate of 40 per cent was obtained. Cancer of the tongue is the most serious of the intraoral malignant tumors. A review[12] of 94 consecutive unselected cases reported in 1954 showed a five year cure rate of 32.0 per cent, and a more recent study of 120 cases raised the cure rate to 33 per cent, which compares favorably with results reported by other clinics. Involvement of the posterior third of the tongue with extension to the anterior pillar is supposed to carry a very poor prognosis. However, a recent study[16] of 40 such cases revealed a five year cure rate of 38 per cent. It should be noted that the cervical node metastases observed in this series were treated exclusively with irradiation therapy.

Cancer of the gums constitutes one of the most controversial problems, and its treatment is important because it complicates so many of the tumors originating in the tongue, cheek, and floor of the mouth. Practically all of the well known authorities have stated that interstitial therapy cannot be used in the gums because of the danger of bone necrosis. However, our experience has convinced us that heavily filtered low intensity radium needles provide one of the best available methods for the treatment of such lesions. The technique is rather difficult and requires quite a bit of patience, but the results which usually render a radical jaw resection unnecessary compensate for all of the difficulties encountered. In 1952 we published a survey[14] of 87 cases, 70 of which had been followed for five or more years. Complete healing of the lesion was observed in 72.4 per cent, and a five year cure rate of 40 per cent was obtained.

Most surgeons believe that a block dissection offers the only chance of a cure of metastatic cervical lymph nodes secondary to squamous cell carcinoma, and yet the average cure rate obtained in good surgical clinics with this method in operable cases amounts to about 25 per cent. In 1935 we adopted a rather intensive

technique consisting of the implantation of one or more layers of low intensity radium needles combined with conventional 220 kilovolt x-ray therapy. This technique was based on the belief that the dose of irradiation needed to cure cancer growing in lymph nodes is much larger than that needed for the primary lesion and on the observation that the combination of the two types of irradiation seemed to have a saving effect on the normal tissues. This latter knowledge is substantiated by the serious sequelae obtained by a few radiologists who have attempted to give the entire dose with a cobalt 60 bomb. In 1950, a survey[11] of 146 consecutive cases treated by our method from 1937 to 1944 was published. In this group no nodes could be palpated after treatment in 70 per cent and a five year cure rate of 27.3 per cent was obtained. Although this figure is not appreciably better than that obtained with surgery, it must be remembered that many inoperable cases were included in our series. It is gratifying to note that a fair number of our successful cases have now remained well for more than 10 years.

Cancer of the uterine cervix, which is surrounded by such radiosensitive structures as the rectum, bladder, and ureters, requires the most careful localization of effective therapy if serious sequelae are to be avoided. The adequate treatment of large volumes of tissue not only endangers the adjacent normal structures but may bring about late changes such as anemia and bone damage. For many years, we have used a conservative multiple radium capsule technique for early lesions which is quite safe. However, extensions into the vaginal walls and parametria are much more efficiently treated with low intensity radium needles properly inserted into the involved regions. This type of therapy can be augmented with moderate doses of conventional roentgen-ray therapy delivered to the sides of the pelvis without the production of irreparable damage. Since the depth doses are not large, supervoltage equipment is not needed for this procedure. The basic techniques were described in an article[9] published in 1948. In a series[13] of 82 patients treated in 1948 and 1949, the absolute five year cure rate for 78 patients receiving adequate therapy was 55.1 per cent. In a group of 54 stage 1 and 2 cases, the five year cure rate was 72.2 per cent and persistent sequelae were almost completely absent. This figure compares favorably with the 69 per cent reported by Liu and Meigs for a similar series subjected to radical hysterectomy and lymphadenectomy. It should be noted that an appreciable number of serious complications was observed following radical surgery.

Good results have been obtained with radium implants in a few cases of carcinoma of the vagina, vulva, metastatic inguinal nodes, breast, nasal passage, nasopharynx, orbit, bladder, and penis and of Pancoast tumor, but the material is not sufficient for a statistical survey.

SUMMARY

Low intensity heavily filtered radium sources properly applied still constitute one of the most efficient radiological methods of treatment available for accessible epidermoid carcinoma. The clinical data now available indicate that the newer supervoltage machines and radioactive isotopes will neither increase the cure rate nor reduce the number of secondary internal sequelae produced in such cases.

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ABSTRACT OF DISCUSSION

DR. LOWELL S. MILLER, Houston: In forwarding his manuscript for advance reading, Dr. Martin specifically invited a critical discussion of his paper. However, the low intensity radium sources he describes see frequent use not only in Dallas but also at the M. D. Anderson Hospital in

Houston. Hence we join Dr. Martin in endorsing them, and in sounding a needed word of caution to users of the newer methods. We do not of course believe that radium will cure everything, but it has its place.

Let me deliberately over-simplify what Dr. Martin has said: In the years since 1920, low intensity radium sources in competent hands have proved their ability to cure accessible epidermoid carcinoma—first in France, later in this country and others. In contrast, the supervoltage equipment and radioisotopes of the past decade have yet to prove themselves, and the truly clinical appraisals thus far available clearly indicate (1) that cancer has not changed its stripes to oblige the credulous and (2) that large volume, high dose techniques remain hazardous.

Recalling, though, that even radium therapy had to endure a period of trial and travail before attaining the status of demonstrated worth it enjoys today, there is reasonable hope that the new modalities eventually will be accorded similar respect. As noted by Friedman (in the symposium quoted by Dr. Martin), "It was with the early, ignorant, and erroneous administration of supervoltage irradiation that many serious and fatal injuries were produced. Now, with improved technic, these rarely occur by accident."

That low intensity radium sources will ever be supplanted in the radiologic treatment of certain types of cancer—notably the early carcinomas of the tongue, buccal mucosa, and uterine cervix—is hardly to be expected. There are other types of accessible epidermoid carcinoma, on the other hand, in which the early results of supervoltage treatment, either alone or in combination with radium, are encouraging—the carcinomas of the nasopharyngeal and posterior oral cavities, the more advanced carcinomas of the uterine cervix, and the infiltrating carcinomas of the urinary bladder.

Parenthetically, it behooves all who practice a localized type of treatment for bladder cancer—whether radiologic or surgical—to consider carefully the published work of Dr. Roger Baker,* who has demonstrated the vicious tendency of this neoplasm to extend circumferentially, in lymphatics of the bladder wall, far beyond the visible and palpable margins of the lesion. Such spread was shown to occur in 50 per cent of even the fairly early infiltrating lesions (extension through less than half the thickness of the muscle layer), and in 100 per cent of the more advanced ones—averaging 60 per cent of the bladder circumference in this latter group, and in one bladder reaching 90 per cent. The necessity for total bladder treatment in such cases is obvious.

Southern Medical Association Begins New Home

Ground was broken early in August for the new headquarters building of the Southern Medical Association in Birmingham. Dr. Milford O. Rouse, Dallas, first vice-president of the Association, attended the ceremonies and Mrs. O. W. Robinson, Paris, president of the Woman's Auxiliary to the Southern Medical Association, was represented by the councilwoman from Alabama, Mrs. John M. Chenault, Decatur.

The building is to be paid for by contributions from friends of the Association, and such contributions already have been sufficient to purchase a $50,000 lot and to begin construction on the building.

**Baker, R.: Correlation of Circumferential Lymphatic Spread of Vesical Cancer with Depth of Infiltration; Relation to Present Methods of Treatment, J. Urol. 73:681-690 (April) 1955.*

Carcinoma Of the Larynx

GEORGE S. McREYNOLDS, M.D.

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AFTER almost 100 years, there is still a great deal of argument regarding the ideal treatment of carcinoma of the larynx. From year to year, there is a swing of the pendulum from conservative surgery to radical surgery and back to conservative surgery. Together with the various surgical procedures, irradiation therapy has made its bid for a place in the rational and successful therapy of carcinoma of the larynx. This further complicates the picture.

Dr. George S. McReynolds, associate professor of otolaryngology at the University of Texas Medical Branch, delivered this address before the Section on Eye, Ear, Nose, and Throat at the Texas Medical Association Annual Session in Dallas, April 29, 1957.

The ideal treatment for carcinoma of the larynx is yet to be determined. However, it is important that the first form of treatment be adequate as the secondary treatment offers a low salvage rate. An analysis of 244 cases of malignancy of the larynx, of which 165 were treated actively, is presented.

The chief advantage of irradiation therapy would seem to be the better post-therapy results insofar as voice is concerned. This, however, is not always true. Unquestionably, in properly selected cases, where a cure is accomplished by irradiation, a better voice may result. However, two factors must be emphasized. In the first place, the cases for radiotherapy must be carefully selected. These same cases are ideal for conservative surgical therapy with probably a little better percentage of cures. Second, as has been pointed out previously, the selection of a competent radiotherapist is of the utmost importance. Unfortunately, not all radiotherapists have had sufficient experience in treating carcinoma of the larynx. Too often it is difficult to convince the patient of this fact. When a patient has been referred to a laryngologist for possible surgical treatment, he is likely to prefer to remain with this surgeon because he has been recommended by another doctor. On the other hand, when a surgeon may recommend roentgen

therapy, it is often difficult for the patient to understand why he cannot go "home" for what he considers a very simple procedure. This statement should not be considered a reflection on the ability of radiotherapists, but an admission that we laryngologists have not referred to them a sufficient number of cases. The radiotherapists have had so little experience in treating this type of case that only a few have become proficient.

In my opinion, the ideal case for radiotherapy is one that is superficial and without impairment of motility of the vocal cords, whether the lesion involves one or both cords. This is particularly true in cases of involvement of both cords where the only alternative would be total laryngectomy. Also, other cases such as "carcinoma in situ" and superficial lesions that apparently involve the entire length of the cord where it is difficult, or impossible, to determine the exact limit of the involvement may be more ideally suited for radiotherapy. Furthermore, one should not consider it to be a question of radiotherapy versus surgery, but instead, the best form of treatment for the individual lesion and the individual patient. One should always keep in mind that the first plan of therapy should be definitive and not be chosen with the idea that perhaps this plan may be a cure and if not something else may be done later.

There is a difference of opinion as to the proper form of surgical therapy in carcinoma of the larynx. Some laryngologists, as Le Jeune and Figi, have described a group of early lesions for which they advocate destruction by cauterization under suspension laryngoscopy. This is a very limited group of cases, and whereas these surgeons have obtained good results by this method, it is a questionable procedure in the hands of less experienced operators.

Laryngofissure or thyrotomy is an excellent and satisfactory procedure in properly selected cases. It has been condemned by some laryngologists, probably because it has been tried in cases in which the lesion is too extensive. In properly selected cases the rate of cure should be between 85 and 90 per cent. Ideally, the lesion should be limited to the middle of the vocal cord without involvement of the arytenoid or the anterior commissure. Jackson has described a technique for lesions extending past the anterior commissure. Woodman and others have described procedures a little more radical including removal of part of the thyroid cartilage in lesions involving the anterior commissure. These procedures are limited to a very few selected cases. Except in a large series of cases few, if any, lesions are amendable to these specialized surgical procedures.

Unfortunately, the majority of cases seem to be of such an extent that they require laryngectomy or laryngectomy plus neck dissection. Several authors have written about the necessity of prophylactic neck dissection with laryngectomy even where there is no gross evidence of cervical node involvement. They have demonstrated microscopic metastatic involvement of nodes without gross evidence of enlargement of these nodes. Apparently this is particularly true of supraglottic lesions.

Apparently roentgen therapy has little to offer in advance cases of carcinoma of the larynx. A few years ago, it was advocated that the cartilages of the larynx be removed in advanced lesions by subperichondrial dissection, without removing the larynx in the hope of preserving some laryngeal function. This was done on the theory that more irradiation could be given after removal of the cartilage, thereby increasing the rate of cure. More recently, it has been suggested that removal of the primary lesion by laryngectomy might give a better chance of cure of the extension by irradiation. Neither of these suggestions seem to have any particular value. More often it seems that if the primary lesion can be arrested by irradiation, surgical excision of the extension, as by neck dissection, offers the best chance of cure, particularly in cases in which surgical removal of the primary lesion is not feasible.

UNIVERSITY OF TEXAS SERIES

In the past 15 years we have seen 244 cases of malignancy of the larynx at the University of Texas Medical Branch. Of this group, the youngest patient was 27 and the oldest was 80 years old. The grade of malignancy does not seem to have any particular bearing on the rate of cure except that the younger the patient, the more rapidly the tumor grows and tends to metastasize whereas the older the patient, the less rapidly it grows and metastasizes. Of the 244 cases, 50 received no treatment, either because the patient refused or because the lesion was deemed too extensive, or too far advanced, to justify subjecting the patient to treatment (table 1).

TABLE 1.—*Summary of 244 Cases of Malignancy of the Larynx Observed at the University of Texas Medical Branch.*

Total cases		244
No follow-up		50
Cases treated		194
Palliative roentgen ray only		29
Cases actively treated		165
Roentgen ray	13	
Laryngofissure	19	
Laryngectomy	73	
Laryngectomy and roentgen ray	21	
Laryngectomy and neck dissection	13	
Laryngectomy, neck dissection, and roentgen ray	6	
Direct laryngoscopy	1	
Others	4	
Leukoplakia	15	
Cases living and well		84

Of the remaining 194 malignancies, 29 were considered so extensive that only palliative irradiation was attempted. Even without a definite follow-up, it is safe to assume that all 29 of these patients died of carcinoma.

This leaves 165 cases that were actively treated by one of several forms of treatment or a combination of methods. An analysis of the results will be made and an attempt will be made to draw some conclusions from these cases. Although five year cures are not available in all cases, it is hoped that some trends can be established and will be of some value. Also, in malignancy of the larynx, except in rare exceptions, a three year cure is just as valid as a five year cure because of the facility of examination of the original site and also because, with rare exceptions, the primary metastasis is to the cervical node. Again, observation of the cervical region is much simpler than metastatic regions of malignancies in other primary sites.

One of the most difficult group of cases to know how to treat is the group of cases of leukoplakia of the vocal cord. This reminds one of the old joke about treating the common cold. We do not know what to do for the cold, but if it progresses to pneumonia, we can treat that. We know much more about how to treat carcinoma of the larynx than we do leukoplakia. These cases are particularly important since they are generally recognized as premalignant lesions. A certain percentage of them will develop into a frank malignancy. One can temporize with these cases if one is dealing with a cooperative and intelligent patient who can be expected to return for periodic examination. Also, it must be emphasized that one cannot rely on one biopsy for such a diagnosis. Some lesions will show leukoplakia from superficial tissue while tissue from a different area or from a deeper layer will show a definite malignant change. To reiterate, all cases of leukoplakia are potential malignancies and should be considered as such until arrested. In a person who is a heavy smoker, the lesion often will regress if the patient will discontinue smoking. If he continues to smoke, the lesion more likely will become malignant. Leukoplakia in persons who do not smoke are less likely to regress. In some such cases, where the lesion is limited to one vocal cord, resection of that cord by thyrotomy or laryngofissure may be advisable. At first thought, this may seem radical. However, those lesions do not respond to irradiation. If one can remove the potential of malignancy and prevent more extensive surgery, that is, laryngectomy, by a relatively simple and safe procedure, such as laryngofissure, it may well be worth while and justified. This is even more important in the relatively unintelligent or the indigent patient whom the physician cannot depend upon to return for frequent, periodic, follow-up examinations and repeated biopsies.

In this series, there are 27 cases that we diagnosed as leukoplakia from the first. In a number of cases the diagnosis remained the same after many subsequent biopsies. Some of these eventually showed an actual, true malignant change. Of these 27, no follow-up was available in 10. Of the remaining 17, laryngofissure was performed in 9, and in 2 cases laryngectomy was necessary when the patients finally returned. The remaining 6 still showed simply a leukoplakia at the time of the last biopsy. However, it should be pointed out that some of these 6 still may show actual malignant changes. Of this group of 17 patients, 16 are living and well today. One patient in whom a laryngofissure was done died of a recurrence.

As stated before, laryngofissure is an excellent procedure in properly selected cases. Of the 165 cases treated, a laryngofissure was done in 19 cases. This includes both the cases of frank carcinoma and the cases of leukoplakia. This may seem like a small percentage of the total group in whom this procedure was utilized, but our indications for this conservative procedure are very limited. In considering the advisability of laryngofissure, there is a good axiom to follow. If one wonders whether a laryngofissure is adequate to effect a cure, the lesion is most probably too extensive. As stated before, the lesion, ideally, should not involve either end of the cord and there should be no impairment of motility. If one is in the least doubtful, the patient either should receive roentgen therapy or should have a laryngectomy.

Of this group of 19 patients operated on by laryngofissure, a follow-up was possible in 18. Only 1 patient had a recurrence. Two of this group died of other diseases with no evidence of recurrence. This leaves 15 cases without evidence of disease and only 1 case with actual recurrence. The 2 deaths without evidence of recurrence were after one year and three years. Of the patients without evidence of disease, one is 14 years postoperative; 2 are 10 years; 1, nine years; 1, seven years; 3, six years; 2, four years; 4, three years; and 1, two years postoperative. Thus, 14 out of 15 have been well three years or longer, the other being only one year postoperative. One of the patients had what might be considered a hemilaryngectomy. Frozen section at the time of operation showed that the tumor, while localized to the middle one-third of the cord, had invaded down to the internal perichondrium. Because of this, the adjacent portion of the thyroid cartilage also was removed. This patient is well without evidence of recurrence after six years.

As one might expect, the largest group of cases is the one treated by laryngectomy. There were 73 cases in which a laryngectomy was performed. No follow-up was possible in 13 of these cases. There was 1

operative death in a patient who had had a known, previous coronary occlusion. Also, there were 2 postoperative deaths due to pneumonia. Eleven of these patients had a recurrence, leaving 41 free of disease. Of the 60 patients followed, 41 are free of disease. Thirty-one are well three years or longer; 38, two years or longer.

Also there were 21 patients in whom a laryngectomy was performed, followed by irradiation. No follow-up was available in 2 of these. Eleven died of recurrence, leaving 8 patients living and well, five to 10 years after treatment.

A small group of 13 cases was treated by laryngectomy and neck dissection. There was no follow-up in 1 case. Of the remaining 12 patients, 9 died of recurrence, leaving only 3 living and well. Seven of the 13 cases were pyriform sinus lesions. Of the 3 surviving patients, 2 had pyriform sinus lesions, 1 living nine and 1 four years and the third had an intralaryngeal lesion with gross evidence of cervical node metastasis (living one year after surgery).

There were 6 cases treated by laryngectomy, neck dissection, and roentgen ray. None of these 6 patients survived.

The cases treated by roentgen ray have been divided in two groups. Twenty-nine patients were given what was considered as palliative therapy only. These cases were extensive with metastasis and/or extrinsic lesions. All of these patients can be assumed to have died of the disease. There were 13 early lesions treated by roentgen ray. Of these, there was no follow-up in 3 cases. One patient died of a carcinoma of the bronchus and another died of heart disease, neither having any evidence of the original disease. One patient has a recurrence after five years. This patient was originally advised to have a laryngectomy but refused and was not considered an ideal patient for roentgen-ray therapy. Of the 10 cases followed 7 patients are living and well, 2 of the patients dying of other diseases without evidence of recurrence and 1 having a recurrence.

From the foregoing, it can easily be seen that early diagnosis is important since the percentage of cures in such cases is so much higher than in cases further advanced. This may seem trite to repeat. However, it also seems obvious from the 50 cases in which lesions were too extensive for treatment plus the 29 cases in whom only palliative roentgen therapy was given that we still have not repeated this statement too often. Of the total 244 patients only 84 or 34.4 per cent are living. Of the 165 actively treated only 84 or 50 per cent are living.

Our results in the eases of more radical surgery have been disappointing. Perhaps if more cases of neck dissections were done on the patients on whom only laryngectomy was performed our statistics for radical surgery would look more convincing. In our series where there was a question of cure by laryngectomy, better results were obtained by postoperative irradiation.

In conclusion, carcinoma of the larynx is still an interesting and challenging problem. There are still problems to be solved.

♦ Dr. McReynolds, Department of Otolaryngology, University of Texas Medical Branch, Galveston.

ABSTRACT OF DISCUSSION

DR. HERBERT H. HARRIS, Houston: Dr. McReynolds' cure rate of approximately 60 per cent is well within that considered by most laryngologists as very good results. He and I seem to agree fairly well that the best treatment for carcinoma of the larynx is that which will cure the patient. I do not feel that we should take any particular issue on whether surgery or roentgen ray is better, but try to recommend the best treatment for that particular patient. I might add, however, that in many instances roentgen-ray treatment to the larynx has been found entirely satisfactory if given by one who is experienced and who understands the problem of radiation.

It is my feeling that more radical neck dissections should be done where surgery is contemplated for removal of the larynx, when indicated. While the surgery is a little more formidable, the morbidity is certainly no higher, and in my experience the mortality has been no greater.

Surgical Lesions Of the Thyroid

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SINCE there is inadequate time to discuss all of the surgical lesions of the thyroid, I shall limit my discussion to some of the important or controversial aspects of toxic diffuse goiter, toxic nodular goiter, and carcinoma. First I wish to call attention to the apparent decrease of the incidence of thyroid disease; for example, in the Illinois Research Hospital between the years 1936 and 1940, 14.9 per cent of the operations performed by my associates and me were for thyroid lesions. Since then, there has been a steady decline. An analysis of figures between 1952 and 1956 reveals that only 6.6 per cent of the operations performed were for thyroid lesions. As might be expected, there is a difference in the incidence of the various types of goiters. In this period, toxic diffuse goiters decreased by 25 per cent; operation for toxic nodular goiter decreased by 66 per cent. On the contrary, the operations for nontoxic nodular goiter increased by more than 100 per cent (table 1).

TOXIC GOITER

Since there is a great deal of difference between the manifestations and treatment of toxic diffuse goiter and toxic nodular goiter, they will be considered separately.

Dr. Warren H. Cole, professor and head of Department of Surgery, University of Illinois College of Medicine, presented this paper as a refresher course April 29, 1957, at the Texas Medical Association annual session in Dallas.

Nontoxic nodular goiter and carcinoma of the thyroid are definitely surgical lesions, but toxic diffuse goiter may be either surgical or medical since some utilize thyroidectomy for this lesion whereas others use radioactive iodine. Elimination of thyrotoxicosis can be achieved in toxic diffuse goiter by radioactive iodine, but radioactive iodine may possibly produce carcinoma.

TOXIC DIFFUSE GOITER

At the present time toxic diffuse goiter is about twice as common as toxic nodular goiter in the Chicago area.

Manifestations.—The diagnosis of toxic diffuse goiter can be made with accuracy when exophthalmos accompanies the symptoms of thyrotoxicosis. However, since exophthalmos occurs in only about one-half of the patients with toxic diffuse goiter, there naturally will be a large group of patients in whom diagnosis is uncertain. If the thyrotoxicosis is mild, it can be readily confused with symptoms of neurosis and menopause. It is likewise known that the basal metabolic rate is inaccurate and must not be used as the most important factor deciding the diagnosis. Often when there is doubt concerning diagnosis of hyperthyroidism, a course of iodine therapy (Lugol's solution) can determine easily the diagnosis. If the patient's symptoms are from hyperthyroidism, the manifestations will be reduced considerably in 5 or 6 days by the iodine.

However, the most accurate method in establishing a diagnosis of hyperthyroidism is the determination of uptake of radioactive iodine. In euthyroid persons the uptake following an oral dose will be less than 35 per cent at the end of 24 hours in about 90 per cent of patients. In patients with hyperthyroidism the uptake is more than 35 per cent in 90 to 95 per cent of cases. An analysis of the level of protein-bound iodine may add to the accuracy of the radioactive iodine test in diagnosis. In hyperthyroid patients 24 hours after ingestion of radioactive iodine, 95 per cent or more of the radioactive iodine in the blood is present as protein-bound iodine. In euthyroid persons less than 45 per cent of the iodine will be present in the protein-bound form.

Treatment.—At present there is disagreement as to the best method of treatment for toxic diffuse goiter. Many workers in the thyroid field have abandoned the surgical removal of the thyroid and have adopted the use of radioactive iodine.

Although I admit radioactive iodine is an effective agent in the treatment of toxic diffuse goiter, I still favor thyroidectomy largely because of the possible danger of production of carcinoma of the radioactive iodine burn in the thyroid. Although it is true that there are no proven cases of production of carcinoma by radioactive iodine, it is realized that if carcinoma should be induced by the agent it would probably take at least 20 years for its development, and the drug has not yet been given that long. In spite of the absence of proven cases, the recent discovery initiated by Duffy and Fitzgerald[1] revealed that a remarkably large percentage of adolescents with carcinoma of the thyroid had a history of roentgen-ray radiation in their infancy. For example, Clark and Rule[2] reported that all of their 15 patients with thyroid cancer, 15 years of age or younger, had had roentgen-ray treatment in infancy or early childhood for tonsillitis, pertussis, enlarged thymus, or cervical adenitis. Moreover, in our series[3] of 15 patients with thyroid cancer, 20 years of age or younger, 10 had received radiation to the head and neck when they were between the ages of 2 months and 6 years. All 10 patients in our series, 15 years or younger, had had roentgen-ray therapy, whereas 5 patients between the ages of 15 and 20 years had not had radiation; the total dose varied between 200 and 625 r with the average about 430 r.

In a detailed follow-up study of 1,630 patients having thyroidectomy for hyperthyroidism, Cattell[4]

TABLE 1.—*Relative Incidence of Thyroid Lesions, Operated on 1936 to 1956.*

Years	Toxic Diffuse Goiter (%)	Toxic Nodular Goiter (%)	Nontoxic Nodular Goiter (%)	Carcinoma (%)	Thyroiditis (%)
1936 to 1940	41.7	31.4	21.7	0.37	0.49
1940 to 1944	41.5	18.5	37.0	3.1	0.4
1944 to 1948	41.0	11.8	41.1	3.0	0.4
1948 to 1952	20.4	15.0	58.3	4.0	2.8
1952 to 1956	32.1	8.0	53.7	4.7	1.6

noted good results in 95 per cent. In 1,000 consecutive cases of his series the mortality rate was 0.2 per cent; tetany occurred in 1.5 per cent, nerve injury in 1 per cent, and recurrence in 2.4 per cent of cases.

Admittedly, treatment with radioactive iodine obliterates the possibility of nerve injury and almost completely obliterates the recurrence of tetany after treatment. In 628 patients with hyperthyroidism treated with radioactive iodine, Clark and Rule[5] reported good results in 82.8 per cent. In this group varying degrees of hypothyroidism were noted in 17.2 per cent. In 56 per cent of their patients, the desired result was obtained with only one dose; two doses were required in 25.5 per cent; and three or more doses in the remainder or 18.4 per cent. Crile and McCullagh[6] reported 14 millicuries as the average dose utilized by them. Severe thyroid crises occasionally may develop following the use of radioactive iodine, but they are very rare. Experimentally Doniach[7] has reported the production of an occasional cancer of the thyroid following the use of radioactive iodine and methylthiouracil in rats.

If the surgical method is to be utilized in the treatment of toxic diffuse goiter, antithyroid drugs are advisable first to produce euthyroidism; propylthiouracil, Tapazole, and methylthiouracil are equally effective. However, there is a great tendency among clinicians to give inadequate dosage of these drugs with a delay in production of euthyroidism. The dose for propylthiouracil is 500 to 600 mg. per day. Bartels and Kohn[8] have reported that doses of propylthiouracil equal to 600 to 1,000 mg. per day seldom result in reactions. It is obvious that 300 mg. per day should be the minimum dose utilized unless sensitization develops. The dose for Tapazole is 80 mg. per day. Each of these drugs should reduce the basal metabolic rate about one point per day. Toxic reactions consist of neutropenia, fever, urticaria, and dermatitis, but they are uncommon with each of the three drugs. However, with prolonged, heavy dosage the white blood count should be taken once or twice per week and the patient instructed to report to the physician immediately if a sore throat or other significant symptoms develop. The appearance of infection might be an indication that leukopenia and agranulocytosis were present. Just before euthyroidism is produced, and about the time the basal metabolic rate is plus 10, treatment with Lugol's solution in doses of 10 or 15 drops per day should be instituted. The iodine reduces vascularity and friability of the gland. In fact this result is so striking that no operation should be performed with the patient on propylthiouracil therapy unless iodine had been given 12 to 18 days before the date of operation. It is well known that permanent remissions may be obtained with antithyroid drugs in 40 to 50 per cent of cases. However, in the opinion of most clinicians, this incidence is too low to justify use of antithyroid drugs. The antithyroid drugs should be withdrawn from therapy 4 to 5 days before operation to prevent the possible development of a severe reaction (that is, agranulocytosis) on the day of operation.

TOXIC NODULAR GOITER

There is likewise controversy among clinicians as to the desired treatment of toxic nodular goiter although perhaps the majority of them believe the use of radioactive iodine alone is not justifiable as in the treatment of toxic diffuse goiter. Even though the radioactive iodine therapy would reduce the thyrotoxicity satisfactorily, the patient still would be left with a nodule. Most clinicians consider the danger of development of malignancy in this nodule is too great to justify leaving it in.

If operation is to be decided upon as the treatment of choice, the thyrotoxicity first should be eliminated. This can be done with radioactive iodine. Since the reduction of hyperthyroidism can be achieved just as readily with antithyroid drugs as with radioactive iodine, it would appear desirable to use the former and avoid the slight possibility of future complications (development of malignancy) in the patient. I prefer reduction of hyperthyroidism with propylthiouracil as described previously, and then thyroidectomy after 2 weeks' therapy with iodine (Lugol's solution).

INDICATIONS AND CONTRAINDICATIONS TO RADIOACTIVE IODINE

Practically all workers in the thyroid field agree that radioactive iodine is the treatment of choice in recurrence of hyperthyroidism following thyroidectomy. It is likewise indicated in patients who are extremely poor risks or who have some disease complicating the hyperthyroidism. Likewise it will be indicated in patients who refuse operation.

There are several contraindications which are agreed upon by all. Even those who are strongly in favor of radioactive iodine do not give it to children. Almost all clinicians would not use it as the definitive treatment in toxic nodular goiter, particularly if a solitary nodule is present. Radioactive iodine must not be given for hyperthyroidism to patients who are pregnant or lactating.

CARCINOMA OF THE THYROID

There is much controversy concerning numerous phases of carcinoma of the thyroid. In the first place, there is difference of opinion regarding the incidence of carcinoma in nodular goiter. The incidence is reported between 5 and 17 per cent as indi-

cated in table 2. At the Illinois Research Hospital during the period 1936 to 1953, my associates and I[9] encountered carcinoma in 15.6 per cent of patients with nontoxic nodular goiter. In patients with solitary nodules, the incidence was 20.9 per cent compared to 8.7 per cent in patients with multinodular nontoxic goiter. We found carcinoma in only 1 per cent of patients with toxic diffuse goiter. There is considerable disagreement relative to the origin of carcinoma of the thyroid. However, most workers in this field now believe that the majority of carcinomas of the thyroid arise as separate tumors and not in preexisting nodules. In our series at Illinois Research Hospital only 9 per cent of patients with nontoxic nodular goiter were males, but 36 per cent of the patients with carcinoma were males. This indicates that the danger of cancer in nodular goiter is presumably four times greater in males than in females. The average age of patients in our series with benign nontoxic goiter was 44.5 years, and of patients with cancer of the thyroid, 47.5 years. The duration of the enlargement of the neck was 11.8 years in patients with nontoxic nodular goiter as compared to 4.1 years in patients with cancer.

TABLE 2.—*Incidence of Thyroid Cancer in Nontoxic Nodular Goiter as Reported in the Literature.*

Author	Location	Year	Carcinoma in All Nontoxic Nodular Goiters (%)	Carcinoma in Solitary Nontoxic Nodular Goiters (%)
Beahrs et al.[16]	Rochester, Minn.	1951	3.8	
Cerise et al.[17]	New Orleans	1952	17.3	19.8
Cole et al.	Chicago	1952	15.6	20.9
Cope et al.[18]	Boston	1949	10.1	19.0
Crile[19]	Cleveland	1950	10.9	24.5
Hinton & Slattery[20]	New York	1952	7.2	
Lahey & Hare[21]	Boston	1951	5.9	10.0
Waldron et al.[13]	Houston	1957	15.2	11.1
Ward[22]	San Francisco	1944	4.8	15.6
Young[23]	Oklahoma	1950	9.4	18.2

All surgeons have noted a greater incidence of carcinoma in children with nodules in the thyroid than in adults. In our series[3] 31.1 per cent of children with nodules in the neck had carcinoma. In an extensive series of 145 cases assembled from the literature Winship and Chase[10] noted an incidence of 29 per cent of carcinoma in children with nodular goiter.

PATHOLOGY

Almost all pathologists have different classifications for carcinoma of the thyroid. There is so little agreement that McDermott and his associates[11] offered a simplified classification which may be adequate from the standpoint of treatment. They divided the tumors into three groups: (1) papillary, (2) follicular, and (3) undifferentiated. In their series of 179 patients with carcinoma of the thyroid, they classified 50 per cent as papillary and 25 per cent as each of the other two groups. All agree that papillary tumors are more prevalent in young people than in old people. Distant metastases are uncommon although metastasis appears early in the lymph nodes. Blood borne metastases are not common in papillary tumors.

DIAGNOSIS

A preoperative diagnosis of carcinoma of the thyroid is difficult. In a study made by my associates and me a few years ago, we found that the manifestations of nontoxic nodular goiter and carcinoma of the thyroid were remarkably similar (table 3).

TABLE 3.—*Comparison of Incidence of Symptoms in Nontoxic Nodular Goiter and Thyroid Cancer at Illinois Research Hospital.*

Symptoms	Benign Nontoxic Nodular Goiter (% in 100 Consecutive Cases)	Thyroid Cancer (% in 50 Consecutive Cases)
Hoarseness	21	38
Increase in size	56	42
Asymptomatic	33	20
Cough	33	24
Dysphagia	29	34
Feeling of pressure	48	44
Choking sensation	35	36
Dull ache	12	12

After Majarakis, J. D.; Slaughter, D. P.; and Cole, W. H.: Carcinoma of Thyroid Gland, J. Clin. Endocrinol. 13:1530-1541 (Dec.) 1953.

Actually, rapid increase in size of the gland, and cough, are more frequent in patients with benign goiter than in patients with malignant goiter. However, the incidence of hoarseness is definitely greater in patients with carcinoma. We noted also that in 60 patients with nontoxic nodular goiter examined for vocal cord paralysis, no paralysis was found, although we admit nontoxic nodular goiter in a larger series would be responsible for a small number of patients with vocal cord paralysis (perhaps 1 or 2 per cent). However, in our series of patients with

carcinoma of the thyroid, vocal cord paralysis was present in 28.8 per cent.

Because of the difficulty in establishing the diagnosis preoperatively and because of the danger of spread of the carcinoma by a needle biopsy, operation is the procedure of choice in nodular goiter, especially if it is nontoxic.

TREATMENT

As intimated previously, the diagnosis of carcinoma of the thyroid seldom will be made preoperatively, unless it has invaded to the degree of inoperability. Because of the high incidence of carcinoma in nontoxic nodular goiter, I recommend a fairly complete lobectomy on the involved side, including the isthmus, assuming that the other side is normal by surgical exploration. With a relatively small nodule, a subtotal thyroidectomy can be performed, but the surgeon should wait for microscopic examination by frozen section before closing the wound. If the diagnosis of malignancy is returned by the pathologist, then a radical neck dissection should be done.

Crile[12] favors a conservative type of operation consisting of lobectomy and removal of the palpable metastatic nodes if present. It was his opinion that for a papillary carcinoma conservative therapy will be adequate, and that for other types of carcinoma, a radical operation will be unsuccessful.

Most surgeons favor radical neck dissection for all types of carcinoma of the thyroid, assuming they are operable. A radical approach consists of the removal of the entire lobe, all of the areolar and lymphatic tissues, the strap muscles, and the internal jugular vein on the involved side. There is a slight difference of opinion as to whether or not the lobe on the uninvolved side should be removed. However, if the lesion is papillary and no metastases are found elsewhere, it would appear wise to leave the other side intact, except that removal of the anterior half would be desirable because the tumor occasionally may extend into the opposite side. If metastases are noted beyond the limits of resection in the neck, operation is, of course, contraindicated.

Nonsurgical methods of treatment are indicated if distant metastases develop or if all of the tumor is not removable by operation. Desiccated thyroid, radioactive iodine, and roentgen ray or radium therapy are available; recent experiences indicate that the former (instituted by Dunhill) is probably the most effective. It is given daily, in large doses of 2 to 4 grains per day. Remissions are common following the use of desiccated thyroid, but there is no evidence that it will result in cure of the disease.

If radioactive iodine is used, it is desirable to remove the uninvolved lobe, since its removal increases the uptake of iodine. However, it must be remembered that even after total thyroidectomy not more than 10 per cent of patients with carcinoma of the thyroid will reveal significant uptake of iodine in their cancer. Some authorities recommend giving a thyroid-stimulating hormone (TSH) or propylthiouracil to increase the uptake of iodine in the cancerous deposits. Waldron and his associates[13] reported that under heavy doses of TSH, the thyroid of 40 to 60 per cent of patients with carcinoma of the thyroid will pick up radioactive iodine. However, serious reactions (rare) from TSH have been reported. Maloof and his associates[14] warned that the beneficial effect of TSH may be neutralized or outweighed by the growth stimulus imparted to the metastases. Roentgen-ray therapy is utilized in metastatic carcinoma but in general is no more effective than radioactive iodine in the treatment of metastases.

All workers agree that papillary tumors of the thyroid are much less invasive than other tumors. It is agreed that a comparatively conservative operation would be sufficient for many patients with papillary tumors. However, in papillary tumors practically all surgeons have noted metastases in the adjacent lymph nodes. Frazell and Foote[15] have demonstrated the need for a radical procedure by studying the excised specimen in patients having a radical neck dissection in the absence of palpable metastatic lymph nodes; they found positive nodes in 61 per cent of the specimens removed even though they were not palpable

TABLE 4.—*Five-Year Survival Rates (Mean) in All Types of Thyroid Cancer as Reported in the Literature.*

Author	Location	Year	No. Patients Followed 5 Yr.	Five-Year Survival (Mean) %
Beahrs & Judd[24]	Rochester, Minn.	1951	284	71.5
Horn et al.[25]	Philadelphia	1947	42	55.0
Frazell & Foote[15]	New York	1950	215	39.1
MacFee[26]	New York	1952	34	38.2
Cohen and Moore[27]	Minneapolis	1954	84	37.0
Cole et al.[9]	Chicago	1952	49	36.8
Portman[28]	Cleveland	1940	149	35.5
De Quervain[29]	Switzerland	1935	108	17.5
Total			965	47.2

preoperatively. This is a strong argument for radical operation even in papillary carcinoma.

RESULTS

The results of therapy for thyroid carcinoma vary considerably as reported by various authors throughout the country (table 4). It is difficult to understand such a large variation in results. It is possible that the strong limitations on diagnosis by some pathologists would alter the results considerably. There is a slight possibility that geographic location might alter the character of the tumor, but this possibility would appear to have little support since it is not found in other tumors. An important factor in the 5 year survival rates will be the percentage of patients with papillary tumors. McDermott and his associates[11] reported a 5 year survival of 73 per cent in papillary tumors. This no doubt would compare closely with the experiences of other authors.

SUMMARY

For treatment of toxic diffuse goiter, I still favor thyroidectomy after preparation of the patient with propylthiouracil and iodine. Radioactive iodine is effective in eliminating thyrotoxicosis, but the danger of production of carcinoma by this agent cannot be excluded completely, particularly in view of the high incidence of radiation to the neck region (in infancy) in patients 15 years or younger with carcinoma of the thyroid. For patients with toxic nodular goiter thyroidectomy after reduction of thyrotoxicity with propylthiouracil and iodine appears to be the preferred treatment. There is agreement that radioactive iodine is indicated in recurrent toxic goiter, in very poor risk patients, and when operative treatment is refused; the agent is contraindicated in pregnant or lactating women and in children with toxic goiter.

For treatment of carcinoma of the thyroid I recommend radical neck dissection. Results will be much better in papillary carcinoma, in which group the 5 year survival rate is expected to be as high as 75 per cent. Desiccated thyroid is perhaps the most effective method of treating metastases from thyroid carcinoma.

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Carcinoma of the Male Breast

F. A. SELECMAN, M. D.
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AN OFTEN overlooked part of a physical examination by the hurried physician is an adequate consideration of the male breast. Public education campaigns should emphasize, both to the laity and the profession, the significance of masses in the male breast.

Dr. Frank A. Selecman is a general surgeon and is associated with the University of Texas Southwestern Medical School in Dallas. He presented this paper at the April 1, 1957, meeting of the Texas Surgical Society in Dallas.

Carcinoma of the male breast constitutes about 1 per cent of all breast cancers. Diagnostic symptoms are similar to those in the female, though with varying significance. Radical mastectomy, followed by irradiation if axillary metastases exist, is the treatment of choice. Castration and later adrenalectomy may be helpful.

Carcinoma of the male breast is deserving of consideration as the majority of authors hold that a poor prognosis is the rule. Whetting the diagnostic acumen by increasing the physician's awareness can aid in earlier diagnosis.

This presentation will attempt to correlate recent information regarding the incidence, diagnosis, prognosis, and treatment of cancer in the male breast. Three cases are presented herein.

CASE REPORTS

CASE 1.—C. R. F., age 53, on August 18, 1945, reported soreness of the breast for 24 hours and inability to sleep the previous night on this account. The lump was excised the same afternoon, and following frozen section a radical mastectomy was performed. Pathological diagnosis was duct-cell carcinoma, grade III, with hyperplastic axillary lymph nodes. The patient received roentgen-ray therapy to the chest and axilla which he says caused prolonged morbidity. When he was examined in September, 1956, there was no evidence of recurrence.

CASE 2.—R. E. C., age 50, height 5 feet 9 inches, weight 240 pounds, noted a lump in the right breast for 6 weeks

and stated that he had noted a secretion of milk 2 years before. A firm, irregular nodule was palpable at the upper lateral border of the areola. On January 31, 1950, following biopsy and frozen section, a radical mastectomy was performed. Pathological diagnosis was duct-cell carcinoma of the breast and reactive hyperplasia of lymph nodes.

On August 27, 1951, left simple mastectomy was performed for questionable tumor. Pathological diagnosis was fibro-fatty tissue, breast.

The patient died March 5, 1952, from malignant hypertension without evidence of recurrence.

CASE 3.—L. S., age 47, noted a lump in the right breast for 6 months, and was concerned only with recent increase in size. An irregular hard lump, approximately 3 cm. in diameter, lateral to the right areola, was noted. Skin attachment was definite and one firm node was palpable in the axilla. A chest roentgenogram was negative. On May 14, 1954, biopsy, frozen section, and radical mastectomy were performed. Pathological diagnosis was adenocarcinoma, grade III, with 3 of 25 axillary lymph nodes showing metastasis. No postoperative roentgen-ray therapy was given. The patient continues in good health, and is doing his job as a mechanic for a bus company.

INCIDENCE

Carcinoma of the male breast is reported to occur approximately once in every 100 breast cancers. Statistics vary from .87 per cent[28] to 2.2 per cent[27] with respect to all breast cancer (table 1). Sachs stated that only .38 per cent of male carcinomas are of the breast.[30] Neal found 30.36 per cent of 165 male breast tumors to be carcinoma and 6 per cent to be sarcoma.[23] The incidence of bilateral malignancy was 2.7 per cent, or approximately the same as in females.

This low incidence may be related to the lack of the cyclic stimulus present in the female. Blain noted that the male breast follows the general rule that a functionless vestigial structure usually is not the site of tumor formation.[1] Others think that this may not be quite true, as the male breast is a complex series of ducts lined by a single layer of columnar epithelium resembling somewhat the preadolescent female breast.[27, 30]

TABLE 1.—*Incidence of Male Breast Cancer.*

Author	In All Breast Cancer	In Male Breast Tumors
Jackson, Munnell	0.92	
Neal	1.24	30.36
Payson, Rosh	2.2	
Peck	0.87	34.9
Sachs	1.32	
Treves, Holleb	1.0	

AGE OF OCCURRENCE

The average age at which carcinoma of the male breast occurs generally is reported to be slightly higher than that of the female, with averages ranging from 52.1[36] to 61[14] years (table 2). The average age at which carcinoma of the female breast occurs was 53.8 in 186 cases reported by Lewison.[18]

Hartman and Magrish recorded a case in a 6 year old male, and Lewison reported the highest known age of occurrence to be 93.[18]

TABLE 2.—*Age of Occurrence of Male Breast Cancer.*

Author	Youngest (yr.)	Oldest (yr.)	Average (yr.)
Hunt, Kraft	12	91	57.0
Jackson, Munnell	43	76	61.0
Neal	30	89	57.7
Payson, Rosh			56.6
Peck			59.5
Sachs			57.17
Treves, Holleb	24	85	52.1
Wainwright	23		54.2

DURATION OF SYMPTOMS

The average recorded duration of symptoms ranges from 6 months to 3.14 years. These figures are based on cases of from 3 weeks to 5 years in duration. Other authors have reported isolated cases in which a history of breast abnormality could be elicited of from 20 to 40 years.

The interval between onset of difficulty and seeking medical advice most frequently is reported to be longer than 1 year. Delay may be attributed to (1) male vanity, (2) lack of knowledge regarding the significance of a breast mass, (3) male role as breadwinner making a visit to the physician inconvenient, and (4) physician's failure to examine.

This represents a paradox, in that the relative sparcity of tissue should make the early discovery of abnormality and consequent early consultation the rule.

ETIOLOGY

Attempts to correlate various factors in the etiology of male breast carcinoma fail to produce any clear-cut relationships even in those cases following estrogen administration in the treatment of carcinoma of the prostate.

McClure and Higgins stated: "The Committee on Research of the Council on Pharmacy and Chemistry of the American Medical Association sent a questionnaire to 150 urologists asking whether or not they had observed breast cancer in any patient treated with estrogens for prostatic cancer. It showed that out of a total of approximately 17,000 patients, there was only one additional possible case of cancer of the male breast."[21]

Although a few cases of male breast carcinoma have occurred following or during estrogen therapy, the percentage relationship to the total number treated remains small and borders on simple coincidence.

However, the occurrence of breast enlargement may be attributed to estrogen, and the hormone's ability to produce one abnormality does not presuppose that other more serious effects will not be obtained. At the present time, the cause and effect relationship can only be suspected.

Karsner discounted the possibility of gynecomastia being a premalignant lesion: "The reports of malignant changes in gynecomastia evidently are based on the assumption that any enlargement of the male breast is gynecomastia. No consideration is given to the possibility that enlargement may be due to the neoplasm rather than to the phenomena which constitute gynecomastia. . . . if it ever follows gynecomastia, [it] is exceedingly infrequent."[15] Gilbert found 9 of 19 patients with carcinoma of the breast to have had gynecomastia;[4] Huggins, Jr. and Taylor, only 1 of 75 cases;[12] and Treves and Holleb, none in 146 cases.[36]

Heredity is apparently of significance only in those individuals in whom there is a high familial incidence of cancer. Carcinoma of the male breast has been reported in all races.

Although trauma often has been implicated as a cause of malignancy of the male breast, one should consider that the incidence of significant and repeated traumas greatly exceeds the incidence of male breast carcinoma. Lewison quoted Ewing, ". . . traumas reveal more malignant tumors than they cause."[19]

DIAGNOSIS

Important signs and symptoms in the diagnosis of male breast carcinoma are much the same as in the female. The significance varies somewhat. A mass or tumor (73 of 75 cases are located beneath the nipple, reported Huggins, Jr. and Taylor) is the most frequent complaint.[12]

Pain occurs less frequently than in the female and is usually a late symptom. Skin retraction is more often noted in the male. One should remember that skin changes may be due to an expanding lesion as well as an infiltrating one, and will be seen in a high proportion of benign tumors in the male.

Ulceration is a more frequent occurrence, ranging from 25 per cent reported by Treves and Holleb[36] to 60 per cent reported by Peck.[28] It is to be noted that Haagenson and Stout did not record ulceration as a presenting complaint in 378 cases of female breast carcinoma.[7] That ulceration may play a part in poor prognosis was emphasized by Huggins, Jr. and Taylor, pointing out that skin ulceration with its attendant chronic inflammation and increased blood and lymph flow speeds tumor embolization.[12]

Although Sachs recorded 48.3 per cent of his cases with axillary involvement,[30] Peck reported 80 per cent;[28] Payson and Rosh, 72 per cent;[27] and Guthorn, 73 per cent.[6] The average involvement is higher than the 61 per cent of 495 cases reported by Haagenson and Stout in the female.[7] The altered prognosis in axillary involvement is well known.

Discharge from the nipple, while infrequent, obviously is more significant than in the female and particularly if bleeding is present.

Differential diagnosis of the following benign conditions should be considered: gynecomastia, syphilis, tuberculosis, adenofibroma, hemangioma, lipoma, sebaceous cyst; and Paget's disease and sarcoma as malignant lesions.

PATHOLOGY

All histologic types of carcinoma of the breast found in the female have been recorded in the male. These may be indistinguishable microscopically. Behavior is the same with extension, recurrence, and metastases to the same areas. Sachs stated that osseous metastases from male breast cancer are osteolytic only,[30] but Savlov quoted a case report by Castillo in which osseous metastases were osteoblastic with castration followed by osteolysis.[31]

It is of interest that sarcomas are relatively more frequent in the male than in the female breast.[23]

Wainwright has held that in dealing with malignancy here, as elsewhere, the higher the grade of malignancy the poorer the prognosis.[37]

THERAPY

Biopsy and radical mastectomy should proceed in an orderly and well planned manner following the established principles of radical breast cancer surgery. Operability is determined as in similar involvement of the female breast.

Roentgen-ray therapy is indicated when axillary metastases are present.

Castration may be followed by responses as dramatic as those seen in prostatic carcinoma.[31] The exact place of castration has yet to be determined, but its value in the presence of symptomatic metastases is well documented.[3, 9, 31, 33] Probably two-thirds of patients so treated exhibit tumor regression and/or palliation.[19] Orchiectomy alone is useful in inoperable or poor risk patients.[33]

Lewison advocated the use of estrogens in those who fail to respond to orchiectomy,[19] whereas Treves stated that stilbestrol is ineffectual in the patient with reactivation following castration.[33]

Adrenalectomy has been proposed in advanced cases of carcinoma of the male breast. It has been demonstrated that hypertrophy of the adrenals follows castration.[33] It has been postulated that the relatively short duration of improvement observed in some patients with advanced breast cancer following

the production of hormonal imbalance is the result of a delayed compensatory adrenal activity which counteracts the produced imbalance. Adrenal cortical hyperplasia also has been found in cancer cases of several types[26] subjected to autopsy. Dao stated that ". . . when after orchiectomy there is no improvement, or there is remission with subsequent relapse, it is postulated that there is production of steroid hormones from extragonadal sources in the body causing failure or reactivation of the disease; the source of the extragonadal steroid hormones was found to be the adrenal cortex."[2] He reported 2 cases of his own, 1 with good results for 6 months and the other for more than 3 years.

That the beneficial results followed by adrenalectomy are not due to maintenance steroids alone has been shown by West and others.[38]

In selection of patients for this procedure the patient who responded well to orchiectomy initially may receive the greatest benefit from adrenalectomy.

Chemical adrenalectomy, 200 to 300 mg. of cortisone per day, may produce remission which is usually short lived. This regimen may be of value in the patient not able to tolerate surgery.

Hypophysectomy should be considered for male as well as female.

RESULTS

A glance at table 3 and comparison with the 5 year survival rate of Haagenson and Stout of 58.2 per cent[7] is sufficient to illustrate the difference in results between treatment of carcinoma of the male and female breast.

COMMENT

The generally poorer prognosis of carcinoma of the male breast may be due to several reasons. The short distance the tumor cells must traverse with early invasion of the surrounding tissues and its associated complications coupled with a greater delay in seeking advice may be the most significant.

When the statistic reported by Haagenson and Stout that in the female 48 per cent of their cases were of less than 6 months' duration[7] is compared to the average duration recorded herein (more than 1 year), it becomes apparent that delay is at least of equal importance with the anatomical considerations in the treatment and prognosis of male breast carcinoma.

Treatment should consist initially of the same sound surgical principles of radical mastectomy utilized in the female, to be followed by irradiation in the presence of axillary metastases. Castration frequently is followed by beneficial results in palliation of recurrence, or in those inoperable, at least in pain relief and subjective well being and frequently by regression of tumor and metastases.

When reactivation following castration occurs, one must decide whether estrogens, chemical adrenalectomy (cortisone), or bilateral adrenalectomy will afford the greatest relief.

TABLE 3.—*Results of Treatment of Male Breast Cancer.*

Author	Cases followed	With or Without Disease, 5 year survival %	Without Disease, 5 year survival %	10 year survival %
Gilbert, 1933 . . .	26	19		
Hartnett, 1948 (Quoted by Savlov)[29]	50	22		
Huggins, Jr. and Taylor, 1955 . . .	42	19	12	
Payson and Rosh, 1949	16	50	19	
Peck, 1944	10	30	10	
Sachs, 1941	197	48		3
Sumerville, 1952 . .	18	27.4		14.3
Treves, 1955	35		29.1	
Wainwright, 1927	111	19		

SUMMARY

Carcinoma of the male breast represents approximately 1 per cent of all breast cancers.

The average age at occurrence ranges from 52 to 61 years.

Delay in diagnosis is remarkable in that duration of symptoms averages more than one year.

Gynecomastia is not likely to be a forerunner or to have been present.

Skin changes, for example, dimpling and ulceration, are common.

Nipple discharges are more significant than in the female.

Sarcomas are relatively more frequent in the male than in the female breast, for example, 6 per cent versus 1+ per cent.

Therapy is standardized as in the female.

Two-thirds of patients with metastasis show regression or good palliation following castration.

Bilateral adrenalectomy is to be considered for recurrences following castration.

Prognosis for 5 year survival averages 30 per cent for male versus 58 per cent for female patients.

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A complete list of references may be obtained from the author; it also is available with reprints of this article.

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Can the Cure Rate Of Squamous Cell Carcinoma of the Uterine Cervix Be Improved?

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SINCE the institution of radiation therapy in the treatment of squamous cell carcinomas of the uterine cervix shortly after the beginning of the century, two major advances in techniques have produced a rise in the cure rate. The first decade of radium therapy was marked by occasional cures obtained at the expense of numerous complications. The development, first of the Stockholm technique and, a few years later, of the Paris technique made systematic cures possible without excessive damage. These two techniques have been, with minor modifications, the basis of all successful radium therapy of the uterine cervix cancers. An increasingly better clinical understanding of the application of radium therapy to the natural behavior of the cervical carcinomas, resulting in a greater individualization of treatment to adjust to varying anatomy and spread of the disease, has permitted steady increase of cure rates.[6, 7, 8, 13]

Dr. Gilbert H. Fletcher, chief, Department of Radiology, University of Texas M. D. Anderson Hospital and Tumor Institute, presented this paper for the Section on Radiology April 30, 1957, at the Texas Medical Association annual session in Dallas.

There are three possibilities for improving the cure rate in squamous cell carcinoma of the uterine cervix: radical departure from conventional radium therapy; injection in the parametrium of radioactive material, such as gold, which would sterilize the lymphatic spread; and high doses to the whole pelvis with supervoltage roentgen therapy, followed by much diminished local radiation.

External irradiation has been systematically added to radium therapy since the end of the 1920's. This has resulted in improvement of cure rates, mainly in stage II and stage III. Concomitantly, with the increasing number of earlier cases, absolute cure rates have shown an upward trend in most centers throughout the world. Figure 1 illustrates that trend at the

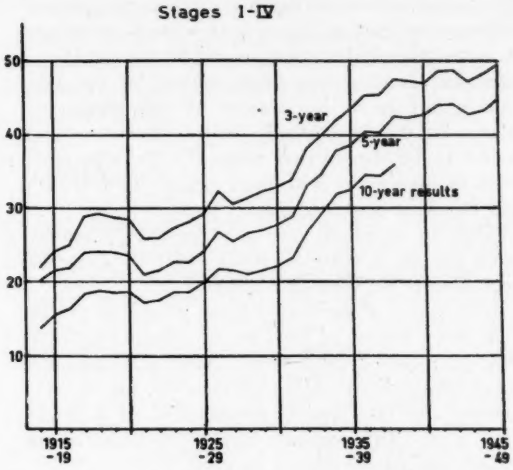

Fig. 1. Cancer of the uterine cervix, 1914-1948 (all cases traced), with 3, 5, and 10 year relative apparent recovery rates (5 year moving averages, 1914-1918, 1915-1919, and so forth). Cases treated prior to 1929 have been reclassified according to the League of Nations Classification. Cases in which the growth involved both parametria have been allotted to stage III (prior to 1937 to stage IV). Cases in which the growth has been fixed to the pelvic wall by a firm but not nodular parametrium have been allotted to stage II (prior to 1927 sometimes to stage III). [After Kottmeier, H. L.: Place of Radiation Therapy and of Surgery in Treatment of Uterine Cancer, J. Obst. & Gyn. Brit. Empire 62:737-773 (Oct.) 1955.]

Radiumhemmet.[9] Centers[2] with only 15 per cent stage I carcinoma of the cervix have absolute cure rates ranging from 40 to 50 per cent; stage I between 75 and 85 per cent; stage II, 50 to 65 per cent, and stage III, 20 to 30 per cent. Those institutions favored by a much higher percentage of early cases show some absolute cure rates of 60 per cent and even more.

In our institution, using an individualized radium and external irradiation technique (table 1), cure

TABLE 1.—*Modified Manchester Radium Technique Used at M. D. Anderson Hospital and Tumor Institute.*

15 10 } 3" tand. 10	15 10 } 2" tand. 72 hr. insertion, repeated 10 da. later mg/h – 7,000 – 12,000 mg/h
15 small ovoids 15 20 medium ovoids 20 25 large ovoids 25	
Pt. A.	(Radium only) 7,000-7,500 γ r 17 da.
Pt. B.	5,500 r (early cases) 54 da. 6,000 r (late cases) 65 da.
Radium (γ r not corrected) + external beam	

rates (table 2) of better than 80 per cent have been obtained in stage I cases, and more than 60 per cent in stage II cases. Approximately 80 per cent of the group suitable for radical hysterectomy[10] (combined stage I and early stage II cases) are salvaged. This is fully as good as the results obtained by radical hysterectomy and lymphadenectomy.[10]

TABLE 2.—*Results of Treatment (5 Yr. Survival) of Squamous Cell Carcinomas of Cervix, Previously Untreated (Excluding Carcinomas of Cervical Stump), August, 1948-April, 1952.*

Patients registered		292
Patients treated		257
Patients not treated		
Stage IV, due to distant metastases	15	
Disease limited to pelvis (9 stage III, 9 stage IV)	18	35
Refused treatment (1 stage III, 1 stage IV)	2	
Grossly incomplete treatment (palliation, miscellaneous causes)		25
Patients alive at 5 years		141
Absolute cure rate (patients registered)		48.3%
Relative cure rate (patients treated)		54.5%

	Registered	Absolute Cure Alive	Absolute Cure Rate(%)	Treated	Absolute Cure Alive	Absolute Cure Rate(%)
Stage I	37	34	92	37	34	92
Stage II A	71	52	73	71	52	73
Stage II —	123	82	67	123	82	67
Stage II B	52	30	58	52	30	58
Stage III	94	25	27	84	25	30
Stage IV	38	0	0	13	0	0
Stage I Stage IIA+	108	86	80	108	86	80

Before a discussion of the possibilities of improving results by radical surgery, isotope therapy, and supervoltage roentgen therapy, an analysis of the causes of failure will be helpful in stating the elements of the problem.

A tabulation of the causes of failure (table 3) in our material shows that in the stage I and stage II cases the disease on and around the cervix is almost always controlled. In addition, approximately 50 per cent of the patients who died had either distant metastases or intercurrent disease. From the first fact, one can infer that a different approach to the treatment of the primary disease on and around the cervix is not warranted. A different and more radical treatment of the pelvic wall disease can salvage only a fraction of those patients who died (20 per cent), as intercurrent diseases and distant metastases already seeded at the time the patient is first seen are beyond control. Systematic lymphadenectomies after completion of thorough radium and roentgen-ray therapy (in these early cases, moderate doses to the pelvic wall) can be effected with no additional risk and therefore should be investigated. In order to obtain an uncontroversial answer, one must develop two series of cases, with and without lymphadenectomy, by strict random selection of the material. This clinical experiment is now being carried out in our institution. To avoid bias, the clinician is not notified until the completion of the radiation therapy whether or not a lymphadenectomy is to be performed.

Different or more radical radiation therapy to the parametria and the pelvic walls, in that favorable group, would be unwise unless there is no appreciable risk of major or minor complications. This therefore excludes high doses to the whole pelvis and leaves only injection of intraparametrial colloidal gold as a potential means of sterilizing tumor cells in the lymphatics and the lymph nodes. This approach has been investigated since 1950 at the Washington University Medical Center,[1] and so far the results (table 5) are of interest. According to the authors, complications are at a minimum and the salvage rate seems to be greater in the group which has had intraparametrial gold, although hysterectomies and lymphadenectomies have been performed in some percentage of those

TABLE 3.—*Sites of Active Disease Prior to Death of 116 Patients (Group 1)—August, 1948-April, 1952.*

Sites* of Disease at Time of Death	No. Patients Treated	Vault Alone: With D. M.	Vault Alone: Without D. M.	Vault & P. D.‡: With D. M.†	Vault & P. D.‡: Without D. M.	Complications (Infection)	P. D. (Vault Free): With D. M.	P. D. (Vault Free): Without D. M.	D. M. Alone	Grossly Incomplete Rx (Started)	No Data§	Intercurrent Disease
Stage I	37						1			1		1
Stage IIA	71			1			3	4	2	1	1	3
Stage IIB	52				1	2	3	6	4		3	4
Stage IIIA	47			1	(7) 6			12	6	1	5	2
Stage IIIB	37			2	(15) 13		1	8	2		3	
Stage IV	13			1	1		1	4	4		2	
Total	257	0	0	5	(26‖) 21	2	9	(43) 34	18	3	14	10

*The evaluation of sites of active disease is mostly clinical; more rarely based on surgical or autopsy findings.

†Distant metastases: lung metastases most frequent, then abdomen (outside pelvis).

‡Pelvic disease (almost always pelvic walls) outside of vagina.

§The patients were last seen with no evidence of disease, but died later without any reliable information as to status prior to death.

‖The average doses at Pt. A are 6,600 r (r γ + r) and at Pt. B, 4,700 r (r γ + r) which are lower than the average doses for the whole group (table 5). The explanation is that, due to the distorted anatomy, only 9 of the 26 cases had had a complete conventional treatment.

cases. This is a very interesting clinical investigation which is still in progress.

The late stage II cases are not as favorable and the cause of failure—although not infrequently due to intercurrent disease or distant metastases—is often enough due to uncontrolled pelvic disease to warrant a more radical approach. Poorer results in the stage III cases with greater incidence of uncontrolled pelvic disease, either limited to the pelvic wall only or seeded throughout the entire pelvis, justify a treatment based on the assumption that disseminated pelvic disease is present when the patient is first seen. In selected cases, the surgical approach may be an extended Wertheim operation or, more often, pelvic exenterations. As yet there is no indication that the salvage rate is better than with the conventional techniques of radium and external irradiation. The use of intraparametrial colloidal gold[1] is also being investigated.

The respective contributions of the uterine and vaginal radium to various pelvic structures, with special attention to pelvic wall node areas, have been thoroughly studied at the Radiumhemmet by direct measurements for various radium patterns.[14] This study has shown that the uterine radium is the largest contributor to pelvic wall node areas as well as the lateral parametria. Changes in radium technique to the extent of using only the uterine tandem alone in more advanced cases offer the possibility of irradiating the entire pelvis more thoroughly, and have resulted (at the Radiumhemmet) in increased cure rates in all stages. This has been achieved without any appreciable increase in complications. It requires direct reading instrumentation to furnish data indispensible to the guidance of treatment.

Supervoltage roentgen therapy has been used by various writers[3, 4, 5, 11, 12, 15] without any agreement as yet as to the degree of effectiveness of this new modality of treatment. As we have in our institution a 22 million electron volt (Mev) betatron, it was decided to use high dose radiation to the whole pelvis, with additional local therapy either by radium or transvaginal cone to sterilize the local disease. Table 6 shows the allocation by stages of various treatment techniques. In order to evaluate the effectiveness of such dose levels on pelvic wall node metastases, lymphadenectomies have been performed in 100 consecutive stage III cases 3 months after the completion of the radiation treatment. This study is now completed and shows that less than 20 per cent of the pelvic wall nodes are positive for squamous cell carcinoma. This figure is much lower than one would expect in unirradiated consecutive stage III cases. Complications, of course, do occur in such radical therapy, and adjustments in dose levels both for the external irradiation and the additional local radium or transvaginal therapy, must be made. Now, to investigate the therapeutic value of lymphadenectomy after the completion of radiation therapy, the stage III cases also are taken at random.

It seems that in stage IV cases the disease is so massive that, no matter how radical the treatment, very little can be expected. Short range palliation is the best one can hope for, and radical radiation therapy may be more damaging than beneficial. It is possible that pelvic exenterations may be of value in this group of cases.

In the head and neck squamous cell carcinomas the natural course of the disease can be followed by observing separately the evolution of the primary tumor, the lymphatic involvement of the neck, and the dis-

TABLE 4.—*Rectal and Bladder Complications.*

	Series 1948-1952		Series 1952-1954	
	White and Latin American (165)	Negro (92)	White and Latin American (175)	Negro (83)
Fistulas	1 (0.6%)	5 (5.5%)	0	3 (4%)
Other complications (ulcers, significant proctitis, or cystitis)	9 (6%)	10 (11%)	6 (4%)	1 (1%)

White and Latin American 340 patients—1 fistula (0.3%)

TABLE 5.—*Comparison of Cases and Results, 1½ to 5½ Years.*

Stage	Combined Clinic Cases Treated by Both Methods*			Private Cases Treated by Roentgen-Ray and Radium		
	No. Treated	Incidence of Stage (%)	Alive Without Disease (%)	No. Treated	Incidence of Stage (%)	Alive Without Disease (%)
I	95	39.3	85.3	56	40.0	76.7
II	91	37.6	65.9	65	46.4	53.8
III	56	23.1	32.1	19	13.6	21.1
Total	242	100.0	65.7	140	100.00	58.5

*Includes all clinic cases treated with roentgen ray and radium and private cases treated with radiogold ± radium and surgery.

After Allen, W. M.; Sherman, A. I.; and Arneson, A. M.: Further Results Obtained in Treatment of Cancer of Cervix with Radiogold: Progress Report, Am. J. Obst. 70:786-790 (Oct.) 1955.

tant metastases. More radical and better planned therapy, either surgical or radiotherapeutic or a combination of both, has substantially improved the control of the primary disease. A similar increase in the control of the lymphatic metastases in the neck has not been achieved, and of course, no control of distant metastases already seeded at the time the patient is first seen is possible. One therefore has observed that an increasing freedom from disease locally or even above the clavicle has not been followed by a commensurate increase in survival rate in the more aggressive types of squamous cell carcinomas, such as those originating in the base of the tongue, tonsil, and pyriform sinus. However, one should not forget that not only is life somewhat prolonged, but in most cases the survival time of the patient is rendered more comfortable and the mode of death less painful. Therefore, the survival rate at 5 years does not give a true measure of benefits derived.

TABLE 6.—*Policy of Treatment Since Availability of 22 Mev Betatron.*

Stage I (51)	Radium therapy (8,000-12,000 mg/h) alone or with moderate doses to pelvic walls—3,000 r
Stage II early (58)	
Stage II late (49)	4,000 r whole pelvis (on betatron) + radium therapy (5,000 mg/h) or transvaginal (4,000 r)
Stage III early (63)	6,000 r whole pelvis (on betatron) + radium therapy (3,000 mg/h) or transvaginal (2,500-3,000 r)
Stage III late (101)	6,000 r or 7,000 r + radium therapy (tandem alone 3,000-4,000 mg/h)
Stage IV (20)	6,000-7,000 r whole pelvis (betatron)
342 Total cases	

The same applies to the squamous cell carcinomas of the uterine cervix. One sees less uncontrolled vaginal disease and also fewer—although to a smaller degree—deaths due to uncontrolled pelvic wall disease. If it can be proved that the excruciating pain associated with nerve involvement and bilateral ureteral obstructions is decreased by more radical treatment to the pelvic walls, it is a real gain, although not detectable by a better 5 year survival rate.

In summary, a review of the present status of management of the uterine cervix carcinomas shows that one has two distinct problems. In the favorable group of cases (stage I and early stage II cases) cure rates are excellent and freedom from local residual or recurrent disease is almost the rule. Therefore, any more radical attack to increase an already propitious survival rate should be thought out very conservatively and is justifiable only if no complications result. The problem is different in the more advanced cases, for which more radical radiation therapy, alone or combined with surgery, is justifiable even if the incidence of complication is increased. To obtain statistically significant data, random series of cases treated with the various modalities will be essential.

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ABSTRACT OF DISCUSSION

DR. RALPH S. CLAYTON, El Paso: Dr. Fletcher, an internationally known radiotherapist, has made many significant contributions to the science of radiation therapy, especially in the treatment of carcinoma of the cervix. If his answer to the question raised in his paper had been no, there would be no point in further research in the radiation treatment of this disease. On the other hand, Dr. Fletcher has only implied that we may increase cure rates, especially in the more advanced stages. I believe that we can answer the question more positively. Furthermore, a rough estimate can be made as to how much the cure rate in each stage may ultimately be increased.

However, before making such an estimate, I would like to comment on some aspects of the data in this paper. I sense that Dr. Fletcher is fairly well satisfied with his results in stage I, and I agree that a 92 per cent cure rate is very good indeed. In early stage II lesions his cure rate drops to 73 per cent, and for late stage II the cure rate reported is 58 per cent. For the entire stage II group his cure rate is 67 per cent. The absolute cure rate in stage III of 27 per cent is comparable to that obtained in some other centers. His stage

IV cure rate is zero. There are several important points to be made in evaluating these data.

First, it must be realized that, in the past 10 years, many stage I lesions are earlier than the classical stage I cases in older series with which a cure rate of 75 per cent is usually associated. The later series include many cases discovered by exfoliative cytology with no visible lesion on the cervix. Inclusion of a fair number of these extremely early cases will raise the cure rate toward 90 per cent since these patients are easier to cure by either irradiation or surgery.

Natural variation in staging a series will affect the cure rates in all stages. For example, staging "lower" than the actual extent of the disease will lower the resulting cure rates. Staging "high" will raise the cure rates. To illustrate: staging an advanced stage I as a stage II will leave the very earliest stage I cases in that stage and thus will result in a higher percentage cure in stage I. At the same time, the inclusion of more advanced stage I material in stage II will increase the cure rate in stage II, and so on. Such a tendency to stage "high" may explain why some centers can report a 10 per cent cure rate in stage IV, while other centers report no salvage at all in this stage.

Now we must consider the matter of exclusion of patients not treated for some reason, and the computing of a "relative" cure rate. When this is done, often the cases excluded were the most nearly hopeless ones. In the series reportd here, all 15 cases with distant metastases were in stage IV. It may be possible that no stage III cases had distant metastases found after initial clinical staging. I wonder whether any of these cases with distant metastases were classified as stage IV after exploratory laparotomy revealed involvement of the aortic nodes. At any rate, all 35 cases excluded for purposes of determining relative cure rates were in stages III and IV. It would appear that only the very worst cases were stages III and IV and that less effort was made to treat these women adequately. This leaves, of course, only the most favorable groups to be reported as the basis of over-all relative cure rate. Such selection of material, whatever the explanation, unfairly biases these data.

The 1955 annual report* shows that about 95 per cent of patients presented were treated, whereas in the series reported here only 88 per cent were treated. This means that about 1 patient in 8 either was not treated or was not treated adequately. Also 108, or 42 per cent of those treated or 37 per cent of the entire series, were stage I or II A, or early cases. For these reasons, the reporting of a relative cure rate of 54.5 per cent means very little. Furthermore, reporting an absolute cure rate of 48.3 per cent means nothing because of the high proportion of early stages. The only percentages having real meaning are those by stages.

The least bias is involved in reporting absolute cure rates based on the percentage cured by stages of all patients presented for treatment. This type of approach encourages an all-out effort to treat adequately every patient because the physicians know that all cases will be included in analyzing the data.

Dr. Fletcher's mention of the trends in researches directed toward improving results in the treatment of carcinoma of the cervix is interesting. The high dosage irradiation of the entire pelvis with the betatron encountered the inevitable limitation of large volume effect without appreciably increasing cure rates. The radiogold injection of the parametria is a step toward carrying the radiation sources to the volumes of tissue involved with cancer, and nowhere else. We must learn to irradiate the entire volume involved with cancer to an adequate dose while protecting reasonably well the uninvolved tissues if we are to increase cure rates beyond present levels and at the same time keep the incidence of complications to an acceptable level.

Now, can the cure rates in this disease be improved? Yes, I think they can. Even on the basis of relatively inexact knowledge, and discounting from 100 per cent for failure due to (1) intercurrent disease, (2) distant metastases, (3) radioresistant tumors, and (4) any other reasons preventing adequate treatment, my estimates are as follows:

	Present Cure Rate (%)	Probably Can Be Increased to (%)
Stage I	65-80	85-88
Stage II	40-50	60-70
Stage III	15-25	35-50
Stage IV	0-10	30-40

Over-all, for an average sample by stages, the cure rate probably can be increased from the present 35 per cent to 55-60 per cent.

I would like to ask Dr. Fletcher if he is able to give us more information on the following:

1. What proportion of stage I cases were very early, discovered by exfoliative cytology and with little or no gross visible evidence of cancer on the cervix? [EDITOR'S NOTE: Dr. Fletcher replied that he sees perhaps 2 or 3 very early stage I cases a year discovered by exfoliative cytology, or with no gross evidence of cancer.]

2. Is clinical staging in his institution based on the usual clinical examinations, or is the stage ever changed on the basis of evidence discovered at laparotomy or during treatment? [EDITOR'S NOTE: Dr. Fletcher indicated that the M. D. Anderson Hospital and Tumor Institute abides rigidly by the staging of the international classification, which does not permit a restaging after laparotomy.]

In closing, I must compliment Dr. Fletcher for his tireless efforts and seemingly unlimited energies in research in therapeutic radiology. All of us who are particularly interested in the problem of carcinoma of the cervix follow his work with intense interest and admiration.

**Annual Report on Results of Treatment in Carcinoma of Uterus, Stockholm, 1955.*

Disease and Therapeutic Index Issues First Report

The National Disease and Therapeutic Index, a unique research project designed to provide a continuous flow of reliable, basic facts on medical practice in the United States, has issued its first report, a preliminary analysis of neoplasms as seen by the practicing physician. About 50 Houston physicians have cooperated in this work.

Reports on more than 91,000 patients, collected from a representative sample of physicians in private practice in the United States in 1956, provide a descriptive profile of neoplasms as seen by physicians. Neoplasms were reported for 2.8 per cent of all patients seen. Fifty-five per cent were malignant and 35 per cent were benign.

Forty-two per cent were neoplasms of the genito-urinary system, but less than half of these were malignant. More than 80 per cent of neoplasms of the buccal cavity, pharynx, digestive, and respiratory systems were malignant. About one-fourth of all neoplasm patients reported underwent surgery, and 45 per cent were treated with drugs.

General practitioners, internists, and surgeons reported almost three-fourths of all neoplasms, but a considerably larger proportion of the practice of dermatologists and urologists was concerned with neoplasms than in other specialties.

The Hard Prostate

HARRY GRABSTALD, M.D.

Houston, Texas

IN OUR ATTEMPT to stress a teaching point, the dictum "every hard prostate is carcinoma until proved otherwise" has been emphasized. This is in no manner different from clinical concepts concerning breast, cervical, or other tumors, and is probably correct. Suspicious prostatic nodules, however, differ in one important and very practical aspect; namely, therapy is often carried out on the basis of clinical impression, which, unfortunately, is merely a reflection of our tactile sense and is most certainly not an accurate approach. No surgeon would consider doing radical breast surgery with node dissection without a positive biopsy. Nor would the gynecologist consider extensive pelvic surgery because a cervix "looked suspicious" or "felt hard." Yet, castration and estrogenic hormone therapy is often carried out for what is described by the examining physician as "typical stony hard prostatic carcinoma" based on rectal examination, which, upon biopsy, is proved not to be carcinoma. Orchiectomy in the young middle-aged male is tragic enough when there is proved carcinoma. It is indeed a serious error when this procedure is performed for benign prostatic disease. Goldstein and Weinberg[1] have reported 1 patient who, in addition to being subjected to orchiectomy for a suspicious prostate, also had bilateral adrenalectomy. At autopsy this particular patient had a bronchogenic carcinoma with bone metastases.

Dr. Harry Grabstald, member of the Baylor University College of Medicine staff in Houston and formerly chief of urology, Veterans Administration Hospitals, Houston and Cleveland, Ohio, presented this paper for the Ninth District Medical Society, April 3, 1957, at Navasota.

Biopsy is important in every case of a hard prostate, for a variety of lesions may exist with this sign. An effort should be made not only to diagnose and cure early prostatic carcinoma through definitive treatment, but also to avoid orchiectomy in instances of benign prostatic disease.

Over a period of five years, prostatic biopsy has been performed in every patient with a hard prostate regardless of age, phosphatase levels, or bone lesions. Findings concerning patient selection and material, biopsy techniques and problems have been reported elsewhere.[4, 5, 6]

It is the purpose of this paper to report these prostatic biopsy findings, to classify the proved pathologic entities responsible for the suspicious hard prostate, and to outline a basic clinical approach to the management of these patients.

DIAGNOSTIC METHODS

Given a patient with a hard prostate, obviously carcinoma must be eliminated as a possibility before any thought is given to treatment. Several facets of this problem other than biopsy should be discussed:

1. Too much reliance should not be placed on measurement of the acid and alkaline phosphatases. It cannot be stressed too strongly that normal phosphatases are meaningless in that normal levels most assuredly do not rule out the possibility of carcinoma.

2. An elevated acid phosphatase level does not imply inoperability of the lesion, nor does it even prove the presence of prostatic carcinoma. Blood may have been drawn after the prostate had been thoroughly palpated. Other lesions, as prostatic infarcts or tumors elsewhere, on rare occasions may be associated with elevation of the acid phosphatase. Recent techniques to measure specific prostatic phosphatase prove very promising. The test is not available in most laboratories at present.

3. Elevation of alkaline phosphatase does not prove prostatic carcinoma. Hyperparathyroidism, multiple fractures, severe liver disease, and Paget's disease among other entities may be associated with extremely high levels of alkaline phosphatase.

4. The presence of a stony hard prostate, elevation of alkaline phosphatase, and the presence of osteoblastic bone lesions do not prove prostatic carcinoma. Paget's disease and a benign prostate may coexist in this instance.

5. Finally, it is well to emphasize the error of "watching" these lesions to see whether or not they soften on stilbestrol. Whether or not a prostate feels soft after stilbestrol therapy is of no practical importance. Prostatitis, for example, may soften with time, and should this phenomenon be observed after stilbestrol, one might conclude erroneously that the patient has carcinoma.

There are several diagnostic points which bear emphasis with regard to biopsy techniques per se:

1. The method of choice for the diagnosis and management of early carcinoma of the prostate is perineal exposure and frozen section with radical perineal prostatectomy, if positive. This obviously presupposes a urologist trained to do perineal surgery and a pathologist agreeable and capable of doing frozen sections on prostatic tissue. Only rarely should the frozen section technique present a challenge to

the pathologist. In these instances the incision may easily be closed and the surgeon may wait for the permanent sections and proceed without difficulty in two or three days. The wound at this stage is very easily reopened.

2. Prostatic smear with cytologic study of the expressate is to be condemned. It might be compared with breast massage and examination of the secretion in the diagnosis of breast carcinoma.

3. Perineal punch biopsy is a good procedure and is of value when positive. It is often difficult, however, to hit a small isolated nodule. For example, I have repeated a biopsy via the transrectal route in 7 patients in whom only benign tissue was obtained on punch biopsy. In another patient adenocarcinoma was found on perineal punch biopsy. In 3 of the 7 in whom benign tissue was found on perineal punch biopsy, I have found carcinoma on transrectal biopsy. In the 1 patient in whom adenocarcinoma was found, a second and separate squamous cell carcinoma was discovered. If the perineal punch biopsy is positive, curative surgery can be performed either via the radical retropubic route or the radical perineal technique. Both are accepted procedures although the latter is an older, more established operation.

4. The transrectal route, except under certain rare circumstances, should be reserved for incurable tumors, where only tissue proof is mandatory preliminary to castration or institution of estrogenic hormone therapy. It should not be used preliminary to radical perineal prostatectomy as it may offer considerable added operative difficulty. Large fragments, adequate for easy diagnosis, may be obtained by this method. In these patients much smaller perineal punch fragments may reveal only benign tissue.

5. Insofar as the transurethral resection is concerned, only the expert resectionist can consistently hit the small isolated posterior lamellar nodule by the transurethral route. Again, should the biopsy be positive via this route, radical retropubic or perineal prostato-vesiculectomy may be performed. It should be remembered that, as with the perineal punch biopsy, if the transurethral fragments reveal only benign tissue, this certainly does not rule out the possibility of carcinoma.

PATHOLOGY

An impressive array of miscellaneous benign lesions has been noted among prostatic biopsies (table 1).

Entities in table 1 are essentially an enumeration of the more common diseases of the prostate. Yet, every listed disease may be manifested clinically as a hard prostate, often without subjective findings. Although prostatitis, abscesses, and sarcomas of the prostate are often soft and boggy, they also may be hard. Except for lymphomas and metastatic tumors, every other entity in the table has been seen and proved by biopsy in this series.

TABLE 1.—*Pathology of the Hard Prostate.*

- I. Benign
  - A. Inflammatory
    - 1. Acute prostatitis
    - 2. Chronic prostatitis
      - a. Nonspecific
      - b. Specific
        - (1) Tuberculosis
        - (2) Nontuberculous granulomatous prostatitis
      - c. Abscess
  - B. Calculi
    - 1. Calcinosis
    - 2. Corpora amylacea
  - C. Vascular
    - 1. Prostatic infarcts
    - 2. Periprostatic venous thrombosis
  - D. Hormonal
    - 1. Squamous metaplasia
- II. Malignant
  - A. Adenocarcinoma
  - B. Squamous cell carcinoma
  - C. Sarcoma
  - D. Lymphomas, Hodgkin's disease
  - E. Metastatic tumors

CLINICAL MANAGEMENT

Once one of these benign lesions as a cause for the clinically hard prostate is eliminated, therapy obviously depends upon whether or not the lesion is curable, not operable. There is an important difference between these two terms insofar as prostatic carcinoma is concerned. For example, a patient with proved prostatic carcinoma, bone metastases, elevated phosphatase levels, and local tumor extension is not curable. If, however, he cannot void and is in good physical condition, he most certainly is operable in terms of one of the palliative procedures such as transurethral resection or suprapubic electroresection with implantation of radioactive gold. The latter two procedures, however, are not curable and should not be considered for the small isolated nodule felt in the posterior lobe of the prostate. It is well to emphasize again that perineal biopsy, frozen section and radical perineal prostatectomy remain the procedure of choice for the latter lesion as transurethral surgery, castration, and stilbestrol do not, nor was this combination ever intended, except by accident, to cure carcinoma.

Early Curable Carcinoma of Prostate.—Unfortunately, a defeatist attitude has existed regarding the supposedly low incidence of early and curable prostatic carcinoma. This view has been promulgated by the resectionists not trained in perineal surgery. It has been stated by this group that the incidence of

early curable carcinoma is so low, approximately 5 per cent, as to be statistically an unimportant lesion. In those institutions where the operability rate is only 5 per cent, very likely the same rate will be found for rectal carcinoma in that both lesions are being overlooked and both, being similar in character, are being noted only when obstructive or metastatic symptoms develop. A more accurate appraisal of the true incidence of curable prostatic carcinoma may be seen from the statistics of Jewett[7, 8] at Johns Hopkins Hospital where 19 per cent were suitable for radical surgery. In the Army, Kimbrough[9] has found an operable rate of more than 50 per cent because of the policy of routine rectal examinations in men over 40. In the present series, 33 per cent were found to be diagnosed early enough to justify radical prostatectomy.

Prostatic carcinoma is also comparable to rectal carcinoma in one other respect. Just as both are diagnosed on routine examination and early lesions are discovered in the absence of symptoms, so both have a similarly high curability rate when discovered at this stage.

Incurable Prostatic Carcinoma.—Therapy in the patient with an incurable prostatic carcinoma depends upon two factors: (1) presence or absence of pain and (2) whether or not urinary obstructive symptoms are present.

Since the monumental work of Huggins and his associates it has been well demonstrated that suppression of androgens by castration and estrogenic hormone therapy quite often, and occasionally dramatically, relieves the symptoms associated with pain due to metastases. Castration and estrogenic hormones have never cured a patient with carcinoma of the prostate.

The patient with incurable carcinoma of the prostate does not require a transurethral resection unless he has difficulty in voiding, has severe obstructive symptoms, carries significant residual urine, and so forth. Transurethral resection is not a curative procedure with or without castration and hormones. It is true that on very rare occasions transurethral resection results in a diagnosis of occult carcinoma in one or two of the submitted fragments. This should be interpreted merely as a means of biopsy and should be followed by radical prostatectomy.

Recently the use of radioactive elements has come into prominence in the management of incurable prostatic carcinoma. Results have been dramatic in some cases, and perhaps no better than transurethral resection in others. The technique is promising and should be used in selective cases. Like the transurethral resection and castration, the procedure is not intended to cure carcinoma of the prostate. It is rather like the transurethral resection, a palliative procedure for those patients who cannot void. Again, it might be well to compare the inoperable prostatic carcinoma with the inoperable rectal carcinoma. While colostomy is not the treatment for early carcinoma of the rectum, neither is cystostomy, even with gold, the treatment for early prostatic carcinoma.

SUMMARY AND CONCLUSIONS

The purpose of this paper has been to stress the importance of biopsy and not to prove that lesions other than carcinoma may feel hard. Although I have found, as described in previous publications, that 59 per cent of prostates were benign, and I have quoted Jewett, who has reported 46 per cent in his series from Johns Hopkins Hospital were benign, it is even more important to remember that 41 and 54 per cent respectively in the latter two series were malignant. Although it is our prime concern to diagnose and cure early prostatic carcinoma, it is clearly our responsibility, if for no other than medicolegal reasons, to prevent needless removal of testes. Careful biopsy gives evidence that every hard prostate is not carcinoma. Several patients referred in my series had had orchiectomy done elsewhere, and in several instances I found only benign prostatic disease.

In summary, every hard prostate may or may not be carcinoma. Neither curative radical surgery, as perineal prostatectomy, nor palliative castration and estrogenic therapy should be carried out without microscopic proof of the disease.

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Let us never reduce the quality of service we render to our patients, and never lose the personal touch in medicine. Where there is any opportunity to improve upon our medical care, let us seize it and show our abilities to do an outstanding job. Satisfied patient-customers will give us deserving support when we need it.—Dr. Dwight H. Murray, Presidential Address before American Medical Association House of Delegates, Seattle, Nov. 27, 1956.

Amebiasis: Its Pseudosurgical Appearance

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PRIOR to World War II, in this country amebiasis was considered primarily a problem of the southern states. Unfortunately, no longer is this disease limited to a geographic area. Despite vigorous and apparently successful treatment, amebiasis is characterized by frequent relapses and a marked tendency to persist for many years after the original infection. Consequently, with the release of military personnel who have harbored this disease, any physician may be confronted with its various manifestations.

Dr. J. Walker Davis, San Antonio proctologist, presented this paper for the Texas Society of Gastroenterologists and Proctologists April 28, 1957, in Dallas.

Chronic and recurrent forms of amebiasis may be confused with carcinoma and other lesions of the rectum. Although this confusing condition is unusual (only slightly more than 40 such cases in the literature), it is extremely important that distinction be made as treatment varies greatly. Two cases of hyperplastic or granulomatous reaction of the rectum to amebiasis, which simulates neoplastic disease, are described.

It is essential that one fully realize the clinical picture at the time of original infection may not be that of a classical amebic dysentery. This is particularly true in its recurrent and chronic forms. On clinical examination, the chronic and recurrent forms may be readily confused with carcinoma. Admittedly, this confusing condition is unusual. Hawe reported only 5 such cases out of 1,000 British military personnel who were hospitalized for amebiasis in the Far East. There are only slightly more than 40 such cases reported. However, such reports are becoming more frequent as there is greater familiarity with this clinical picture.

The confusing lesions are usually located in the rectal ampulla and the rectosigmoid. They may be either the large ulcerative form or proliferating and hyperplastic with a granulomatous or less well differentiated mass of chronic inflammatory tissue protruding into the bowel lumen and resembling the submucosal extension of a carcinoma. A distinguishing clinical feature between these lesions and carcinoma is the lack of induration. The proliferative lesion has a very limited tendency towards ulceration and bleeding, in contrast to carcinoma. In the event one is confronted by such an amebic lesion and is so fortunate as to find an associated diagnostic amebic ulcerative proctosigmoiditis, he of course will be guarded in his diagnosis. In the absence of ulcers pathognomonic of amebiasis, one's only protection against ill advised surgery is biopsy.

It is of the greatest importance that these amebic lesions not be confused with carcinoma. The treatment of amebiasis, excepting certain abscesses, is strictly medical. Surgical procedures such as colostomy, anterior resection, or abdominoperineal resection, performed because of a mistaken diagnosis of carcinoma, are extremely hazardous. Surgery of this nature is not necessary and has no worth-while effect on the amebic infection. Actually, such surgery exposes the patient to the hazards of liver abscess and secondary pulmonary involvement. Even local spread from surgery may prove fatal despite full use of amebicides.

Two case reports are presented.

CASE REPORTS

CASE 1.—A 40 year old white man was referred for hemorrhoidectomy. He complained of frequent traces of blood at stool over a period of 12 years. During the week past there had been dripping of blood following bowel movement. For the preceding four years there had been protrusion at stool which now required manual replacement. Ordinarily there was a single morning stool, but four months previously there had been some temporary looseness. He had been treated with penicillin, the avoidance of coffee, and other minor dietary changes. Further questioning obtained a vague history of diarrhea some 10 years previously, but apparently this had not required medical attention. A review of systems disclosed only some minor discomfort in the lower left quadrant. His past history was negative except for the more common childhood diseases. His only surgical procedure was the removal of tonsils and adenoids in childhood.

Findings on physical examination showed a well developed and well nourished white man approximately 40 years of age. Blood pressure was 132/74, pulse rate 78 per minute, temperature 98.4 F., and respiration 16 per minute. Proctologic examination to a point 25 cc. above the anus disclosed: (1) large prolapsing internal hemorrhoids with associated external hemorrhoids; (2) one rather large hypertrophied anal papilla; (3) a fairly firm mass 8 cm. above the anus which involved the posterior one-half of the rectum and which had on its surface several scattered small mucosal ulcerations; and (4) multiple, irregular, dirty, discrete mucosal ulcers limited to the rectum.

The clinical impression was: (1) papillitis; (2) hemorrhoids, internal and external; (3) amebic proctitis; (4)

amebic granuloma; and (5) carcinoma of the rectum, doubtful.

A biopsy specimen of the rectal mass was taken at the time of examination, and the patient was hospitalized for further study. Hospital admission laboratory studies revealed the urine to have a specific gravity of 1.020, and except for 2 to 4 white blood cells per high powered field, it was negative. Serology was negative. There were 4,700,000 red blood cells per cubic centimeter, with hemoglobin 12.4 Gm. per 100 cc. White blood count was 11,000, with a differential count of neutrophils 62 per cent, basophils 2 per cent, eosinophils 6 per cent, lymphocytes 25 per cent, monocytes 3 per cent, and metamyelocytes 2 per cent. Cysts and trophozoites of Endamoeba histolytica were found in the first stool examination. Roentgen-ray studies of the bowel were negative.

The pathologic report was as follows: Grossly, the specimen consisted of three irregular ovoid pieces of tissue, the largest of which measured 9 mm. in diameter. On section it was firm and grayish white. Microscopically, sections of the tissue showed most of it to be covered by mucosa of the large bowel type. There was increased infiltration by chronic inflammatory cells which appeared to spread the glands apart. This chronic inflammatory cell infiltration extended into the submucosa. In the mucosa, but particularly in the submucosa, were some large unicellular structures with relatively small round nuclei. Some of these appeared to contain phagocytized cellular debris and vacuolated granular eosinophilic cytoplasm. These structures were trophozoites of Endamoeba histolytica. The trophozoites were surrounded by dense collections of chronic inflammatory cells. The diagnosis was amebic proctitis.

Treatment consisted of emetine, 1 grain hypodermically each day for six days with simultaneous oral administration of 30 grains of Vioform daily for 10 days. On proctologic examination immediately following this 10 day period of treatment, the granulomatous mass had almost completely cleared and only 4 small, clean rectal ulcers remained. Vioform was continued for an additional 10 day period. At that latter time stool examination was negative for ameba, and on proctologic examination there was complete healing of the rectum without scarring. Stool examination for ameba 6 and 10 weeks following termination of treatment remained negative.

CASE 2.—A 39 year old white man, who was referred for diagnosis, had developed diarrhea six to eight months previously. At the onset of diarrhea, there were four to five very loose stools each day which contained slight traces of blood. For an unrelated complaint he had been placed on several antibiotics, and when he sought medical attention for his diarrhea, stools were reported to be negative for ameba but to contain Monilia. Supportive and symptomatic treatment resulted in the production of a single daily stool described as being somewhat mushy. However, he retained some tenesmus though passing only a small amount of pus with traces of blood. Occasional bleeding at stool with associated protrusion antedated his present complaint by some three years. For an indefinite time, there had been episodes of burning and anal pain following bowel movement. A review of this patient's system was essentially negative except for a 5 pound weight loss during the previous six months. His past history consisted of the more common childhood diseases and smallpox. He was uncertain as to whether he may have had typhoid fever as a child. Surgery consisted of the removal of tonsils and adenoids in childhood, as well as surgical intervention for an intervertebral disk three years previously.

Findings on physical examination showed a well developed, well nourished, ambulatory white man approximately 39 years of age. Blood pressure was 130/76, pulse rate 84 per minute, respiration 18 per minute, and temperature 99 F. Aside from a posterior midline scar over the lumbar area, there were no significant findings. Proctologic examination to a point 15 cm. above the anus, disclosed: (1) small external hemorrhoids; (2) large internal hemorrhoids which tended to prolapse; (3) a rather deep posterior midline fissure; (4) approximately 5 cm. above the anus, an irregular, annular, somewhat pale mass projecting into the lumen of the rectum for a distance of 2 cm., with a thickness varying from 5 mm. to 12 mm.; and (5) in the midrectum just to the right of the anterior midline, four areas of petechial hemorrhage suggestive of an amebic proctitis.

Removal of a biopsy specimen was accomplished at the time of examination.

The clinical impression was: (1) anal fissure; (2) hemorrhoids, internal and external; (3) amebiasis; (4) amebic granuloma; and (5) carcinoma of the rectum, doubtful.

The pathologic report was as follows: Grossly there were no unusual findings. Microscopically, sections of the tissue showed it to be covered by rectal mucosa apparently intact except for some small defects in the superficial epithelium which were artifacts. In most portions of the biopsy material, the mucosal glands were spread apart by an inflammatory exudate. This was composed chiefly of lymphocytes and plasma cells with smaller numbers of histiocytes, neutrophils, and eosinophils. There were also dense aggregates of these chronic inflammatory cells in the submucosa. Numerous small thin-walled blood vessels were present in the mucosa and submucosa. No structures resembling ameba were seen in these sections. There was no evidence of malignancy or specific inflammation. The diagnosis was chronic proctitis.

The patient was returned to the referring physician with the recommendation that he have additional stool studies for amebiasis, and in the event these were negative for ameba that roentgenograms be made of the bowel. Repeated stool examinations were reportedly negative for ameba, and roentgen-ray study revealed only some spasm in the rectosigmoid. Fortunately, it was possible, on direct smear, to demonstrate Endamoeba histolytica thereby confirming the clinical impression.

Upon confirming the diagnosis of amebiasis, Terramycin was prescribed by the attending physician for a 10 day period with little if any symptomatic improvement. Immediately following Terramycin therapy, reexamination to a point 25 cm. above the anus revealed scattered mucosal ulcerations, with negligible reduction in size of the rectal mass. The referring physician then elected to withhold further treatment for a seven day interval. Reexamination at the end of this period showed no appreciable change from the previous observation.

At that time a daily injection of emetine, 1 grain, with simultaneous administration of Milibis was instituted. This treatment was carried out for seven consecutive days. Fourteen days following this, the patient was symptom free, and on sigmoidoscopy there was complete healing of all lesions without scarring.

Since this patient resided in Mexico, it was not practical for him to be held for further observation. Vioform was prescribed for an additional 14 day period. Even though this patient has not been seen again, inquiry by mail some 18 months later indicated no recurrence of symptoms.

SUMMARY

Two cases of hyperplastic or granulomatous reaction of the rectum to amebiasis which simulated neo-

plastic disease have been described. The likelihood of encountering these lesions and the necessity of distinguishing them from other lesions of the rectum are emphasized. The hazards of ill advised surgery have been enumerated. Treatment and results are reported.

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Bosses Don't Die Young

The current belief that promotion can kill you is being challenged. The American Management Association recently sponsored a health survey by industrial physicians, and no evidence was found that executives are in any worse state of health than any other employees. The National Office of Vital Statistics corroborates this and reports that managerial, technical, and administrative groups have lower than average mortality rates, and life insurance companies sell policies to men in executive occupations at the lowest premium rates.

Many companies have instigated periodic health examinations for their employees, both executive and rank and file. Company size seems to have little influence on the usual requirement for a health examination before being hired, but large companies are more apt to offer regular examinations to personnel already employed.

In a new study by Life Extension Examiners covering 5,000 executives of all ages from 30 companies, 58.9 per cent were considered to be in good shape, and 41.9 per cent were reported to be in substandard condition.

Infectious Encephalitis In West Texas--Report of An Epidemic

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ALTHOUGH there has not yet appeared a satisfactory classification of the viral encephalitides, one descriptive term that is commonly applied to eastern equine, western equine, and St. Louis encephalitis is "arthropod-borne." This hyphenated adjective is a result of virus isolation from various insects including mosquitoes, ticks, and mites, and from labora-

Dr. C. A. Pigford, director, Lubbock City-County Health Unit, presented this paper for the Section on Public Health April 30, 1957, at the Texas Medical Association annual session in Dallas.

More than 300 cases of arthropod-borne viral encephalitis occurred in 1956 in eight counties on the irrigated high plains of Northwest Texas. Although the western equine type has been found to be endemic in this area, the outbreak was predominantly of St. Louis encephalitis. Comparison indicates the rates of attacks were four to five times less in a locality where adequate mosquito control was in effect.

tory experiments in which the virus has been passed from animal to animal via the bite of a mosquito. Numerous investigators have pointed out, however, that no satisfactory trials have been made with humans.[1, 3] That the mosquito or other arthropods are the only vectors involved in the acquisition of the disease by man is yet a presumption, and the vector

This report was prepared with the assistance of the Bureau of Laboratories, the Bureau of Sanitary Engineering, and the Division of Communicable Disease Control in the Texas State Department of Health.

relationship of these insects in human disease has not yet been proved.

Nevertheless circumstantial evidence has been strong enough to suggest the term "arthropod-borne" and to indicate that our best approach to control should be directed at the mosquito.[3] Here, too, at least one puzzling situation exists. In control efforts initiated during epidemics it has been found that the subsidence of the epidemic generally does not coincide with the reduction in the mosquito population.

In the United States eastern equine, western equine, and St. Louis encephalitis are widely distributed. Eastern equine, however, is confined to the Atlantic and Gulf Coast states; western equine, to states west of the Mississippi River; and St. Louis encephalitis, to those areas west of the Mississippi and some states in the central area.

In the 19 year period 1938-1956, there were 1,540 cases of infectious encephalitis reported to the Texas State Department of Health. Of this total 964 have been reported in the past 5 years. The 2 years of highest incidence were 1954 and 1956 when epidemics were centered in the Rio Grande Valley and in the High Plains areas, respectively (table 1).

TABLE 1.—*Reported Incidence of Infectious Encephalitis in Texas (1945-1956).*

Year	Cases	Year	Cases
1945	16	1951	63
1946	33	1952	82
1947	3	1953	104
1948	3	1954	336
1949	48	1955	96
1950	59	1956	346

Forty-two cases of infectious encephalitis were reported in Texas during the first 6 months of 1956. During the last 6 months in 1956 there were 304 cases reported. The vast majority of all cases occurred in the High Plains area with the heaviest concentration in the Hale-Lubbock Counties areas. Hale County reported 77 cases for the largest total for a single county. However, Swisher County with 21 cases had the highest attack rate (2.6 per 1,000 population).

TABLE 2.—*Reported Infectious Encephalitis in Texas in 1956—Attack Rates Per 1,000 Population (10 Counties with High Attack Rates).*

County	Reported Cases	Estimated 1956 Population	Attack Rate Per 1,000 Population
Swisher	21	9,700	2.16
Hale	77	37,660	2.04
Briscoe	6	3,650	1.64
Deaf Smith	15	14,471	1.04
Floyd	13	12,500	1.04
Lamb	20	23,450	0.85
Bailey	5	8,600	0.58
Castro	4	7,825	0.51
Lubbock	68	153,483	0.44
Hutchinson	13	36,400	0.36

Table 2 shows the attack rates for the counties reporting the greatest incidence.

Of the 275 cases occurring in Northwest Texas 262 were in counties lying wholly or partly in the High Plains. This area, consisting of approximately 30,000 square miles, lies at an elevation of from 3,000 to 4,000 feet. The surface, which appears to be nearly flat, has numerous, natural, undrained circular depressions varying in depth from 10 to 20 feet and in size from 5 to 2,000 acres. These are called playas and become small lakes during rainy seasons. Average rainfall in this area varies from 15 to 21 inches a year. Significant rains fell in the area on June 10, July 1, and August 15, 1956.

Agriculture provides the principal basis for the economy in this section of Texas with large crops of cotton, alfalfa, grain sorghum, and vegetables grown on fertile lands irrigated by means of many deep water wells. Surplus run-off water frequently fills the adjacent playas.

In detail studies conducted in 1954 Harmston and his co-workers established that three-fourths of the mosquito production on the High Plains occurred in the playas lakes.[2] Irrigation waste was the chief source of water. In an analysis of the composition of adult insects and larvae, Culex tarsalis was found to be the most abundant species. Harmston further reported western equine virus isolation from four pools of mosquitoes collected in Hale and Lubbock Counties.[2] It has been determined by studies now under way that mosquitoes breed prolifically from February through October in Lubbock County.

TABLE 3.—*Reported Infectious Encephalitis in Texas by Week of Onset (High Plains), from July 1 to December 29, 1956.*

Week Ending	Reported Cases
July 14, 1956	0
July 21	2
July 28	1
Aug. 4	6
Aug. 11	13
Aug. 18	21
Aug. 25	24
Sept. 1	44
Sept. 8	32
Sept. 15	14
Sept. 22	45
Sept. 29	12
Oct. 6	31
Oct. 13 to Dec. 29	17

The 1956 epidemic had its onset during the third week in July, rose to a peak in September, and tapered off gradually during October and November (table 3).

Age distribution studies were obtained on 266 cases. The results are summarized in table 4. These data indicate the greatest number of cases are in the 0-9 year age group with 27.4 per cent of the cases

occurring there. However, 24.3 per cent of all cases occurred in persons more than 50 years of age. Approximately 38.5 per cent of the population in Texas is in the 0-19 year age group whereas 18.7 per cent of the population is over 50 years of age.

At least 15 deaths during 1956 were attributed to this disease. Ten of these occurred in the High Plains area. Deaths were in the age groups under 1 year and over 50 years.

TABLE 4.—*Age Distribution of 266 Reported Infectious Encephalitis Cases in Texas in 1956.*

Age	No. Cases	% Total Cases
0-12 months (19 cases)		
1-9 years (54 cases)	73	27.4
10-19 years	35	13.2
20-29 years	37	13.9
30-39 years	34	12.9
40-49 years	22	8.3
50-59 years	31	11.6
60-69 years	20	7.5
70-79 years	10	3.7
80-89 years	4	1.5
Total	266	100.0

There were 11.8 per cent of the cases in persons of Latin-American extraction, 0.85 per cent in the Negro population, and 87.3 per cent among the white population. Approximately 94 per cent of the population is white, 5 per cent Latin-American, and 1 per cent Negro. This seemingly would indicate a higher attack rate among the Latin-American population. However, the seasonal influx of farm laborers may have raised the actual Latin-American population above the estimated 5 per cent of the total population.

The percentage of male patients was 56.6, and 43.4 per cent were female.

Tabulations indicate a majority of the patients either lived in a rural area or had prolonged exposure in rural areas. History of exposure to mosquitoes, and frequent mosquito bites was the rule rather than the exception.

Clinical symptoms in the suspected cases varied from mild illnesses consisting of fever and headache to severe central nervous system manifestations and death. A majority of the patients had severe headache and fever. Onset was usually abrupt although several of the group gave histories of general malaise and moderate headache for several days prior to onset of fever and headache. Stiff neck, vomiting, generalized muscular pain, and drowsiness were all prominent symptoms. Stupor and convulsions were encountered in a few cases. A spastic type of paralysis was present in at least 2 of the more severely ill patients. Disorientation and tremors of varying degree were found frequently. Fever usually lasted 5 to 6 days and fell by lysis. Temperatures frequently reached 104 to 105 F. at the maximum point.

The total cell count in the spinal fluid was usually elevated, but with very few counts above 300 cells per cubic centimeter. Most of the spinal fluid counts showed a lymphocytosis. The protein level was usually elevated and sugar was normal. The peripheral blood often showed a moderate leukocytosis, varying from 9,000 to 12,000 white blood cells per cubic centimeter. The differential count was essentially normal.

ETIOLOGY

Blood specimens were tested by means of the complement fixation test in approximately 180 suspected encephalitis cases from a 23 county area of West Texas. Eighty-five were paired specimens and 95 were single specimens. Thirty-five of the paired specimens reacted with a four-fold increase in titer for St. Louis encephalitis. Ten of the paired specimens reacted with a four-fold increase in titer to western equine encephalitis. In addition, 61 specimens reacted to the St. Louis antigen but either were single specimens or if paired did not show a four-fold rise in titer. Sixteen specimens reacted to the western equine antigen, but either were single specimens or if paired did not show a four-fold rise in titer. Several serums reacted to both St. Louis and western equine encephalitides.

On recognition of the increased incidence of encephalitis on the High Plains, officials of the area requested assistance from the State Department of Health. An epidemiologic team from the department made a preliminary survey of the situation on August 30, 1956, and recommended emergency mosquito control measures (no mosquito control operations were under way anywhere in the area except in the city of Lubbock). With the assistance of the United States Public Health Service, the use of adulticides and larvicides on mosquito habitats was begun September 10, 1956, in the populous centers of eight counties with the highest incidence of encephalitis. Principal targets were accumulated impoundages in playa lakes, accumulated water in roadside ditches, sewage disposal plants, oxidation ponds, irrigation farms, and private cesspools. The chemicals used were DDT as a liquid larvicide and BHC dust as an adulticide applied by hand sprays and Buffalo turbines. Operations continued for 30 days and were discontinued on manifest subsidence of the epidemic.

A mosquito control program conducted by the Lubbock City-County Health Unit had been under way since January, 1956. Efforts were being directed principally at breeding in playas in and around the city. Total control of mosquitoes had been obtained in these potential sources by the application in March,

1956, of ½ pound of Dieldrin per acre to the dry beds of the playas. The average number of mosquitoes per light trap night at five stations in Lubbock never exceeded six during the year 1956.

It is interesting to note that in five adjacent counties (Swisher, Hale, Floyd, Lamb, Lubbock) with extensive irrigated farmlands the attack rate of the disease was lowest in Lubbock County (table 2). Furthermore, in the area of Lubbock County outside the control limits of the city of Lubbock the attack was .80 per 1,000 whereas the attack rate within the control limits was .37 per 1,000.

SUMMARY

A large outbreak of "arthropod-borne" viral encephalitis occurred in the High Plains area of West Texas during the summer of 1956. The majority of these cases were of the St. Louis type although a number of western equine cases were encountered. More cases of this disease have been reported in Texas in the past 5 years than in the previous 14.

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Dr. Pigford, P. O. Box 998, Lubbock.

Fungus Studies At a Tuberculosis Sanatorium

LLOYD R. HERSHBERGER, M. D.

San Angelo, Texas

A RATHER extensive amount of information has been published concerning the etiology of "coin lesions" of the lung.[1, 2, 3, 5, 7, 9] We find much less written about the so-called "classical" cases of pulmonary tuberculosis and the exact etiology of these latter lesions.

The present series represents a study of the "classical" type. All of these patients were admitted to McKnight State Sanatorium with a diagnosis of pulmonary tuberculosis. As will be shown later, less than 50 per cent of the cases yielded a positive culture for Mycobacterium tuberculosis. Should these cases be considered tuberculosis based on the diagnosis of the referring physician only?

Zimmerman[10] has emphasized the frequency of Histoplasma capsulatum as the cause of pulmonary granulomas. More than one-half of his cases (35) were due to this agent. However, the geographic location is of great importance in any study of fungus disease, and Coccidioides immitis ranked first in West Texas.

Dr. Lloyd R. Hershberger presented this paper before the Texas Medical Association's Section on Clinical Pathology April 29, 1957, during the annual session in Dallas.

The accuracy of diagnosis in certain cases is a real problem in admitting patients to a tuberculosis sanatorium. Three to 4 per cent of cases diagnosed as tuberculosis actually are fungus-diseases. In a series of 51 cases, sputum culture studies showed that 39 had no acid-fast organisms, and 2 were proved to be coccidioidal in etiology. Of 60 surgical cases, study of specimens proved 2 cases to be coccidioidal.

At this time let me add that it is of importance to encourage pathologists in our state to use the available techniques for the demonstration of etiologic agents, whether it is Mycobacterium tuberculosis or pathogenic fungi. The "cold" stain is preferred in our experience for the demonstration of acid fast bacilli, and the use of special stains as described by Lillie,[6] McManus,[8] and Gridley[4] are of great value in tissue studies for fungi.

On October 1, 1956, a study was undertaken at McKnight State Sanatorium concerning admissions that were diagnostic problems. This study continued approximately 6 months. During this same period of time, other questionable medical cases and all surgical specimens were studied for possible fungus disease. Both culture and special staining procedures were used.

On admission we reviewed the new cases carefully concerning roentgen-ray diagnoses made outside the sanatorium and also information obtained from sputum studies on these cases before admission. Skin tests were done in questionable cases for histoplasmosis, coccidioidomycosis, and tuberculosis. If a patient showed a positive skin test for either of the fungi, sputum studies then were made for these organisms on Sabouraud's medium. In addition to this,

serologic studies were made on a number of these same cases to determine the presence of antibodies for histoplasmosis and coccidioidomycosis.

Table 1 shows the findings in our fungus studies without an effort to identify the type of fungus grown. It is apparent that one-fourth of the patients

TABLE 1.—*Findings in Fungus Studies.*

Total cases studied by culture	51
Cases showing no fungi	12
Cases showing 1 fungus (pathogenic or nonpathogenic)	10
Cases showing 2 fungi (pathogenic or nonpathogenic)	8
Cases showing 3 fungi (pathogenic or nonpathogenic)	3
Case showing 4 fungi (pathogenic or nonpathogenic)	1
Cases held for further incubation	17

newly admitted with positive skin tests did not show any fungus growth at all. Of the remaining three-fourths, the majority showed only one fungus present in the sputum, but we did find a case in which four different species were present.

Table 2 shows the actual breakdown of the different fungi found. One notes that there were 14 non-

TABLE 2.—*Types of Fungi Present in Cases Studied.*

Yeast (cryptococcus, not neoformans)	21
Aspergillus niger	4
Aspergillus fumigatus	4
Cladosporium	3
Pullularia pullulans	3
Syncephalastrum	3
Rhizopus species	2
Alternaria	2
Coccidioides immitis	2
Candida (not albicans)	1
Fusarium (light)	1
Paecilomyces	1
Penicillium	1
Sterilia	1

pathogenic and 2 pathogenic fungi isolated. Of the nonpathogenic types, the yeast (cryptococcus) was the largest single contaminant.

Table 3 shows the problem faced on admission of this group of patients. From table 3 one can realize

TABLE 3.—*Diagnosis of 51 Cases at Time of Admission.*

Confirmed by culture to have tuberculosis	12
Unconfirmed by culture to have tuberculosis	22
Held for further incubation	17

the problem concerning accurate diagnosis on new patients who are not definitely diagnosed to have tuberculosis. Actually in this group of 51 patients, only 12 could be proved to have tuberculosis, 2 were proved to have a fungus disease, and 39 had a diagnosis based on roentgen-ray findings or the report of sputum studies from the referring physician. A number of these patients were without doubt tuberculous, but because they were started on antimicrobial drugs before admission, the sputum may have reverted to negative.

In another field of investigation, 60 surgical specimens were studied postoperatively by special stains in the preparation of tissues. In this group we were able to demonstrate C. immitis in 2 patients. One case already had been diagnosed by previous sputum studies as was indicated earlier in this paper, but the second was diagnosed only postoperatively by tissue stains.

SUMMARY AND CONCLUSIONS

In a group of admissions to a sanatorium the accuracy of diagnosis of tuberculosis proved to be a real problem in certain cases. It was found that 39 of 51 questionable cases studied by sputum culture had no acid-fast organisms present. However, 2 of these 51 cases were proved to be coccidioidal in etiology.

During this same 6 months period the surgical specimens were studied for possible fungus disease, and 2 cases out of 60 proved to be coccidioidal in origin. From our experience with these new admissions, and also from surgical materials, we learned that 3 to 4 per cent of the difficult cases are not tuberculosis but rather are pulmonary disease due to fungi.

It is further hoped that this study will encourage pathologists to become more familiar with the characteristics of fungi and to recognize both the pathogenic types and the contaminants. Experience in the field is almost necessary in order to obtain a working knowledge of fungi.

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2. Effler, D. B.; Blades, B.; and Marks, E.: Problem of Solitary Lung Tumors, Surgery 24:917-928 (Dec.) 1948.

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FUNGUS STUDIES IN TB — *Hershberger — continued*

ABSTRACT OF DISCUSSION

DR. DAVID W. FLORY, Harlingen.—Fungus studies in cases of suspected or even proved pulmonary tuberculosis deserve emphasis. Cultural methods ultimately must be used in these studies since tuberculous and fungus diseases frequently are indistinguishable by clinical and roentgen-ray methods. The fact that in 2 cases pathogenic fungi were found demonstrates the need for such studies. Dr. Hershberger's statement, "Experience in the field is almost necessary in order to obtain a working knowledge of fungi," certainly is true in the face of the many nonpathogenic varieties found in sputum.

The paper emphasizes the importance of accurate and complete diagnosis before instituting treatment. This applies also to the practice of medicine in general. A tuberculosis sanatorium must study its patients with fungi, other bacteria, and malignant lesions as well as tuberculosis, in mind, and a physician practicing general medicine must study his patients with tuberculosis in mind even while treating them for other diseases.

★ Coming Meetings

Texas Medical Association, Houston, April 19-22, 1958. Dr. Denton Kerr, Houston, Pres.; Mr. C. Lincoln Williston, 1801 North Lamar Blvd., Austin, Executive Secy.

American Medical Association, Clinical Meeting, Philadelphia, Dec. 3-6, 1957. Dr. David B. Allman, Atlantic City, Pres.; Dr. George F. Lull, 535 North Dearborn, Chicago 10, Secy.

Current Meetings

SEPTEMBER

American Association of Obstetricians and Gynecologists, Hot Springs, Va., Sept. 5-7, 1957. Dr. F. Bayard Carter, Durham, N. C., Pres.; Dr. E. Stewart Taylor, University of Colorado School of Medicine, 4200 E. 9th, Denver, Secy.

American Congress of Physical Medicine and Rehabilitation, Los Angeles, Sept. 8-13, 1957. Dr. A. B. C. Knudson, Washington, D. C., Pres.; Dr. Frances Baker, 1 Tilton Ave., San Mateo, Calif., Secy.

American Hospital Association, Atlantic City, Sept. 30-Oct. 4, 1957. Dr. Albert W. Snoke, New Haven, Conn., Pres.; Dr. Edwin L. Crosby, 18 E. Division, Chicago, Executive Director.

American Society of Clinical Pathologists, New Orleans, Sept. 29-Oct. 4, 1957. Dr. J. L. Goforth, Dallas, Pres.; Dr. Clyde G. Culbertson, 1040-1232 W. Michigan, Indianapolis 7, Secy.

International College of Surgeons, U. S. Chapter, Chicago, Sept. 9-12, 1957. Dr. Curtice Rosser, Dallas, Pres.; Dr. Karl Meyer, 1516 Lake Shore Dr., Chicago, Secy.

Southwest Regional Cancer Conference, Fort Worth, Sept. 20-21, 1957. Dr. O. L. Morphis, 815 Medical Arts Building, Fort Worth, Chm.

Tri-State Medical Assembly, Shreveport, Sept. 12-13, 1957. Dr. H. O. Padgett, Marshall, Pres.; Dr. Jason Sanders, Sanders Clinic, Kings Highway, Shreveport, La., Secy.

Texas Academy of General Practice, Dallas, Sept. 22-25, 1957. Dr. George V. Launey, Jr., Dallas, Pres.; Mr. Donald C. Jackson, 1905 N. Lamar, Austin, Executive Secy.

Texas Industrial Medical Association, Houston, Sept. 26-28, 1957. Dr. Robert J. Potts, Houston, Pres.; Dr. Robert A. Wise, Box 2180, Houston, Secy.

OCTOBER

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 13-18, 1957. Dr. Erling W. Hansen, Minneapolis, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Chicago, Oct. 7-10, 1957. Dr. Edgar E. Martmer, Grosse Point 30, Mich., Pres.; Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill., Secy.

American Cancer Society, New York, Oct. 30-Nov. 1, 1957. Dr. D. A. Wood, San Francisco, Pres.; Mr. M. R. Runyon, 521 W. 57th, New York, Executive Vice-Pres.

American College of Gastroenterology, Boston, Oct. 21-23, 1957. Dr. Arthur A. Kirchner, Los Angeles, Pres.; Mr. Daniel Weiss, 33 West 60th, New York 23, Executive Director.

American College of Surgeons, Atlantic City, Oct. 14-18, 1957. Dr. Daniel C. Elkin, Lancaster, Ky., Pres.; Dr. Michael L. Mason, 40 E. Erie, Chicago 11, Secy.

American Heart Association, Chicago, Oct. 25-29, 1957. Dr. Edgar V. Allen, Rochester, Minn., Pres.; Mr. John D. Brundage, 44 E. 23rd, New York 10, Secy.

American Society of Anesthesiologists, Los Angeles, Oct. 14-19, 1957. Dr. Irving M. Pallin, Brooklyn, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph, Chicago 1, Secy.

Association of American Physicians and Surgeons, Interim Meeting of Delegates, Oct. 18, 1957. Dr. Cyrus W. Anderson, Denver, Pres.; Mr. Harry E. Northam, 185 N. Wabash Ave., Chicago 1, Executive Secy.

Southern Psychiatric Association, Nassau, Oct. 6-8, 1957. William H. McCullagh, Jacksonville, Fla., Pres.; Dr. Joseph L. Knapp, 210 N. Westmoreland, Dallas, Secy.

Southwestern Medical Association, El Paso, Oct. 9-12, 1957. Dr. Kenneth C. Sawyer, Denver, Pres.; Dr. C. M. O'Leary, 207 Plaza Court Bldg., Oklahoma City, Secy.

Texas Dermatological Society, El Paso, Oct. 12, 1957. Dr. Charles D. Stewart, Corpus Christi, Pres.; Dr. E. N. Walsh, 1310 Medical Arts Bldg., Fort Worth, Secy.

Texas Geriatrics Society, San Juan, Oct. 25-26, 1957. Dr. Martin S. Buehler, Dallas, Pres.; Dr. J. A. Armstrong, 3810 Swiss Ave., Dallas, Secy.

Texas Neuropsychiatric Association, Dallas, Oct. 18-19, 1957 (with Central Neuropsychiatric Association). Dr. Bruce H. Beard, Fort Worth, Pres.; Dr. Clarence S. Hoekstra, 8215 Westchester Drive, Dallas, Secy.

Texas Pediatric Society, Austin, Oct. 17-19, 1957. Dr. E. M. Wier, Fort Worth, Pres.; Dr. James N. Walker, 5216 W. Freeway, Fort Worth, Secy.

Texas Surgical Society, Waco, Oct. 7-8, 1957. Dr. Truman G. Blocker, Galveston, Pres.; Dr. G. V. Brindley, Jr., Scott and White Clinic, Temple, Secy.

Fourth District Society, Brownwood, Oct. 24, 1957. Dr. Scott H. Martin, San Angelo, Pres.; Dr. Fred Spencer, Jr., 308 W. Chandler, Brownwood, Secy.

Eighth District Society, Bay City, Oct. 19, 1957. Dr. E. Peter Garber, Galveston, Pres.; Dr. John Childers, Univ. of Texas Medical Branch, Galveston, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Oct. 19, 1957. Dr. Kenneth C. Bebb, 1518 10th, Wichita Falls, Chm.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 28-30, 1957. Dr. Herman Fagin, Oklahoma City, Pres.; Miss Alma F. O'Donnell, 503 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Texas State Board of Examiners in Basic Sciences, Austin and Houston, Oct. 18-19, 1957. Henry B. Hardt, Ph.D., Fort Worth, Pres.; Mrs. Pearl A. Barrera, 407 Perry-Brooks Bldg., Austin, Chief Clerk.

National and Regional

American Academy of Allergy, Philadelphia, Feb. 3-5, 1958. Dr. W. B. Sherman, New York, Pres.; Dr. Francis C. Lowell, 65 E. Newton, Boston, Secy.

American Academy of Dermatology and Syphilology, Chicago, Dec. 7-12, 1957. Dr. Nelson P. Anderson, 2007 Wilshire Blvd., Los Angeles 5, Pres.; Dr. James R. Webster, 55 E. Washington, Chicago 2, Secy.

American Academy of General Practice, Dallas, Spring, 1958. Dr. Malcom E. Phelps, El Reno, Okla., Pres.; Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Executive Secy.

American Academy of Obstetricians and Gynecologists, Los Angeles, April 21-23, 1958. Dr. R. Gordon Douglas, New York, Pres.; Dr. John C. Ullery, Ohio State University Hospital, Columbus, Secy.

American Association for Maternal and Infant Health, 1960. Mr. Howard I. Wells, Jr., 116 S. Michigan Ave., Chicago 3, Executive Secy.

American Association for Thoracic Surgery, Boston, May 16-18, 1958. Dr. Brian Blades, Washington, D. C., Pres.; Dr. Hiram T. Langston, 600 S. Kingshighway, St. Louis 10, Mo., Secy.

American Association of Genito-Urinary Surgeons, Edgewater Park, Miss., April 23-25, 1958. Dr. George F. Cahill, New York, Pres.; Dr. W. J. Engel, 2020 E. 93rd, Cleveland, Secy.

American College of Allergists, Atlantic City, April 20-25, 1958. Dr. Merle Moore, Portland, Ore., Pres.; Dr. David Thomas, 1467 Harper St., Augusta, Ga., Secy.

American College of Chest Physicians, San Francisco, June 18-22, 1958. Dr. Burgess L. Gordon, Philadelphia, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut, Chicago 11, Executive Secy.

American College of Physicians, Atlantic City, April 28-May 2, 1958. Dr. Walter L. Palmer, Chicago, Pres.; Mr. E. R. Loveland, 4200 Pine, Philadelphia 4, Secy.

American College of Radiology, Chicago, Feb. 5-8, 1958. Dr. Ira H. Lockwood, Kansas City, Pres.; Mr. W. C. Stronach, 20 N. Wacker Dr., Chicago 6, Executive Director.

American Dermatological Association, Sun Valley, June 4-8, 1958. Dr. Clark W. Finnerud, Chicago, Pres.; Dr. Hamilton Montgomery, 200 1st, S.W., Rochester, Minn., Secy.

American Gastro-Enterological Association, Washington, D. C., May 30-31, 1958. Dr. M. W. Comfort, Rochester, Minn., Pres.; Dr. F. J. Ingelfinger, 65 E. Newton, Boston 18, Secy.

American Gynecological Society, Asheville, N. C., May 19-21, 1958. Dr. Howard C. Taylor, Jr., New York City, Pres.; Dr. A. A. Marchetti, 3800 Reservoir Rd., N.W., Washington 7, D. C., Secy.

American Laryngological, Rhinological, and Otological Society, San Francisco, Calif., 1958. No 1957 meeting. Dr. Percy E. Ireland, Toronto, Ont., Canada, Pres.; Dr. C. S. Nash, 277 Alexander, Rochester 7, N. Y., Secy.

American Neurological Association, Atlantic City, June 16-18, 1958. Dr. Israel S. Wechsler, New York, Pres.; Dr. Charles Rupp, 133 S. 36th, Philadelphia 4, Secy.

American Ophthalmological Society, White Sulphur Springs, W. Va., May 28-30, 1958. Dr. Walters Atkinson, Watertown, N. Y., Pres.; Dr. M. C. Wheeler, 30 W. 59th, New York 19, Secy.

American Orthopedic Association. Dr. David M. Bosworth, New York, Pres.; Dr. Harold A. Safield, 715 Lake St., Oak Park, Ill.

American Pediatric Society, Atlantic City, N. J., May 8-9, 1958. Dr. A. Ashley Weech, Cincinnati, Pres.; Dr. A. C. McGuinness, Room 1036, 2800 Quebec St., N.W., Washington 8, D. C., Secy.

American Proctologic Society, Los Angeles, June 29-July 3, 1958. Dr. Julius E. Linn, Birmingham, Pres.; Dr. Norman D. Nigro, 10 Peterboro, Detroit 1, Secy.

American Psychiatric Association, San Francisco, May 12-16, 1958. Dr. Harry C. Solomon, Boston 15, Pres.; Dr. William Malamud, 80 E. Concord, Boston 18, Secy.

American Public Health Association, Cleveland, Nov. 11-15, 1957. Dr. John W. Knutson, Washington, D. C., Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Executive Secy.

American Surgical Association, New York, April 16-18, 1958. Dr. John Mulholland, New York, Pres.; Dr. William Altemeier, Christian R. Holmes Hospital 19, Cincinnati, Secy.

American Urological Association, New Orleans, April 29-May 1, 1958. Dr. William J. Baker, Chicago, Pres.; Dr. Samuel L. Raines, 188 S. Bellevue Blvd., Memphis, Tenn., Secy.

National Tuberculosis Association, Philadelphia, May 24-29, 1958. Dr. William M. Morgan, Alliance, Ohio, Pres.; Mrs. Wallace B. White, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Chicago, Nov. 17-22, 1957. Dr. C. Edgar Virden, Kansas City, Pres.; Dr. Donald S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, Miami Beach, Nov. 11-14, 1957. Dr. J. P. Culpepper, Jr., Hattiesburg, Miss., Pres.; Mr. V. O. Foster, 1020 Empire Bldg., Birmingham 3, Secy.

Southern Surgical Association, White Sulphur Springs, West Va., Dec. 10-12, 1957. Dr. Floyd W. McRae, Atlanta, Pres.; Dr. George G. Finney, 2947 St. Paul, Baltimore, Secy.

Southwest Allergy Forum, Shreveport, Feb. 23-25, 1958. Dr. H. Whitney Boggs, Shreveport, Pres.; Dr. J. D. Youman, 2021 Line Ave., Shreveport, Secy.

Southwestern Society of Nuclear Medicine. Dr. Henry H. Turner, Oklahoma City, Pres.; Dr. J. R. Maxfield, Jr., 311 Medical Arts Bldg., Dallas, Secy.

Southwestern Surgical Congress, Houston, March 31-April 2, 1958. Dr. Kenneth C. Sawyer, Denver, Pres.; Dr. C. M. O'Leary, 207 Plaza Court Bldg., Oklahoma City, Secy.

United States-Mexico Border Public Health Association, Hermosillo, Sonora, Mexico, April, 1958. Malcolm H. Merrill, Berkeley, Calif., Pres.; Dr. Sidney B. Clark, 243 U. S. Court House, El Paso, Secy.

State

Private Clinics and Hospitals Association of Texas, Dr. R. D. Holt, Meridian, Pres.; Mr. Bill Schumacher, Box 383, Sherman, Executive Secy.

Texas Academy of Internal Medicine, Houston, December, 1957. Dr. Jay C. Crager, Beaumont, Pres.; Dr. Hugo T. Engelhardt, 1216 Main, Houston, Secy. Meetings restricted to members.

Texas Air-Medics Association, Houston, April 20-21, 1958. Dr. W. D. Marrs, Fort Worth, Pres.; Dr. C. F. Miller, P. O. Box 1338, Waco, Secy.

Texas Association of Blood Banks. Dr. C. D. Fitzwilliam, Fort Worth, Pres.; Miss Marjorie Saunders, 3707 Gaston Ave., Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Galveston, February, 1958. Dr. Arthur M. Faris, Houston, Pres.; Dr. Oran V. Prejean, 4317 Oak Lawn, Dallas, Secy.

Texas Chapter, American Association of Public Health Physicians, Houston, April 20, 1958. Dr. Roy G. Reed, Victoria, Pres.; Dr. A. R. Doane, 410 E. 5th, Austin, Secy.

Texas Chapter, American College of Chest Physicians, Houston, April 20, 1958. Dr. John A. Wiggins, Fort Worth, Pres.; Dr. H. M. Anderson, 224 E. Harris, San Angelo, Secy.

Texas Club of Internists. Dr. Charles M. Darnall, Austin, Pres.; Dr. L. C. Carter, 2600 Procter, Port Arthur, Secy.

Texas Diabetes Association, Houston, April 20, 1958. Dr. H. T. Engelhardt, Houston, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Division, American Cancer Society, Austin, Dec. 5-6, 1957. Dr. Porter Brown, Fort Worth, Pres.; Mr. Curt W. Reimann, 5014 Bull Creek Rd., Austin 3, Executive Director.

Texas Heart Association, Houston, April 20, 1958. Dr. James A. Greene, Houston, Pres.; Mr. Edgar M. Brown, 404 Jesse H. Jones Library Bldg., Texas Medical Center, Houston 25, Executive Director.

Texas Hospital Association, Dallas, May 5-8, 1958. Bolton Boone, D.D., Dallas, Pres.; Mr. O. Ray Hurst, Executive Director, 2208 Main, Dallas, Secy.

Texas Ophthalmological Association, Houston, April 22, 1958. Dr. Thomas J. Vanzant, Houston, Pres.; Dr. Louis Daily, Medical Arts Bldg., Dallas, Secy.

Texas Orthopedic Association, Houston, April 21, 1958. Dr. Margaret Watkins, Dallas, Pres.; Dr. B. C. Halley, Jr., 524 Doctors Building, Dallas, Secy.

Texas Physical Medicine and Rehabilitation Society, Houston, April, 1958. Dr. Odon F. von Werssowetz, Gonzales, Pres.; Dr. Edward M. Krusen, Baylor Hospital, Dallas, Secy.

Texas Proctologic Society, Fort Worth, February, 1958. Dr. Hugh Beaton, Fort Worth, Pres.; Dr. C. P. Hardwicke, 920 E. 32nd, Austin, Secy.

Texas Public Health Association, Dallas, Feb. 23-26, 1958. Mr. J. N. Murphy, Jr., Austin, Pres.; Mr. H. E. Drumwright, City Health Department, Dallas, Executive Secy.

Texas Radiological Society, San Antonio, Jan. 24-25, 1958. Dr. T. G. Russell, Houston, Pres.; Dr. J. E. Miller, 6407 Forest Lane, Dallas 30, Secy.

Texas Rheumatism Association, Houston, Dec. 6, 1957. Dr. Jesse W. Hofer, Houston, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Society for Mental Health, Houston, March 22-24, 1958. Dr. Virginia Love, Houston, Pres.; Mr. John Lane, 2510 San Antonio, Austin, Executive Director.

Texas Society of Anesthesiologists, Houston, April 20, 1958. Dr. J. D. McCulley, Houston, Pres.; Dr. Randle J. Brady, 3317 Binz, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, Houston, April 20, 1958. Dr. Tate Miller, Dallas, Pres.; Dr. O. P. Griffin, 1101 Medical Arts Bldg., Fort Worth, Secy.

Texas Society of Ophthalmology and Otolaryngology, Austin, Dec. 6-7, 1957. Dr. Owen R. O'Neill, Paris, Pres.; Dr. Edwin G. Grafton, 4319 Oak Lawn, Dallas, Secy.

Texas Society of Pathologists. Dr. Lloyd Hershberger, San Angelo, Pres.; Dr. Mervin H. Grossman, 3121 Bryan, Dallas, Secy.

Texas Society of Plastic Surgeons, Houston, April 19, 1958. Dr. Truman G. Blocker, Galveston, Pres.; Dr. Steve R. Lewis, University of Texas Medical Branch, Galveston, Secy.

Texas Traumatic Surgical Society, Houston, April 20, 1958. Dr. Russell Holt, El Paso, Pres.; Dr. W. E. Crump, 1300 Eighth, Wichita Falls, Secy.

Texas Tuberculosis Association. Dr. Howard T. Barkley, Houston, Pres.; Miss Pansy Nichols, 2406 Manor Road, Austin, Executive Director.

Texas Urological Society. Dr. Jack Crow, Abilene, Pres.; Dr. Ian Thompson, John Sealy Hospital, Galveston, Secy.

District

First District Society, February, 1958. Dr. W. A. Jones, El Paso, Pres.; Dr. E. S. Crossett, 309 Medical Arts Bldg., El Paso, Secy.

Second District Society, Lamesa, Spring, 1958. Dr. J. Vernon McKay, Lamesa, Pres.; Dr. Noble L. Rumbo, Box D, O'Donnell, Secy.

Third District Society, Amarillo, April 5, 1958. Dr. William Klingensmith, Amarillo, Pres.; Dr. H. Fred Johnson, 2308 W. Eighth, Amarillo, Secy.

Fifth and Sixth Districts Society, Corpus Christi, 1958. Dr. Foy Moody, Corpus Christi, Pres.; Dr. Thelma Frank, 129 Rainbow Lane, Corpus Christi, Secy.

Seventh District Society. Dr. Robert N. Snider, Austin, Pres.; Dr. Richard Lucas, 502 W. 13, Austin, Secy.

Ninth District Society, Conroe, Spring, 1958. Dr. Eugene M. Addison, Huntsville, Pres.; Dr. James H. Sammons, Highlands, Secy.
Tenth District Society, Port Arthur, Fall, 1957. Dr. Charles W. Castle, Liberty, Pres.; Dr. Richard O. Clements, 715 Main, Liberty, Secy.
Eleventh District Society. Dr. M. T. Braswell, Henderson, Pres.; Dr. Hugh F. Rives, Jacksonville, Secy.
Twelfth District Society. Dr. George C. Bryant, Waco, Pres.; Dr. J. T. Archer, Jr., Meridian, Secy.
Thirteenth District Society, Abilene, 1958. Dr. Roy Wilson, Seymour, Pres.; Dr. R. D. Moreton, 1217 W. Cannon, Fort Worth, Secy.
Fifteenth District Society. Dr. L. E. Rutledge, Daingerfield, Pres.; Dr. O. R. Taylor, Jr., Linden, Secy.

Clinics

Blackford Memorial Cancer Lectures, Denison, Nov. 5, 1957. Dr. R. G. Gerard, 509 S. Mirick, Denison, Chm.
Dallas Southern Clinical Society, Dallas, March 24-27, 1958. Dr. C. D. Bussey, Dallas, Pres.; Executive Offices, 433 Medical Arts Bldg., Dallas 1.
International Medical Assembly of Southwest Texas, San Antonio, Jan. 27-29, 1958. Dr. John C. Parsons, 1125 Nix Professional Bldg., San Antonio, Secy.
New Orleans Graduate Medical Assembly, New Orleans, March 3-6, 1958. Dr. Eugene H. Countiss, New Orleans, Pres.; Dr. Maurice E. St. Martin, 1430 Tulane Ave., New Orleans 12, Secy.
Postgraduate Medical Assembly of South Texas. Dr. C. Forrest Jorns, 412 Jesse H. Jones Library, Houston 25, Secy.
State Tumor Conference, Wichita Falls, April 12, 1958. Dr. Edwin C. Bebb, 500 Broad St., Wichita Falls, Director.

Board Examinations

Texas State Board of Medical Examiners, Fort Worth, Dec. 5-7, 1957. Dr. M. H. Crabb, 1714 Medical Arts Bldg., Fort Worth, Secy.

MEDICAL MEETINGS

Texas Pediatric Society

The Texas Pediatric Society will meet in Austin October 18-19, and the program will be as follows:

Primary Tuberculosis—Dr. Ralph Platou, New Orleans.
Open Heart Surgery—Dr. Dan McNamara, Houston.
Management of the Mentally Retarded Child—Dr. Harry Bakwin, New York.
Anaphylactoid Purpura—Dr. Theo Panos, Galveston.
Nephritis and Nephrosis—Dr. James Baty, Brookline, Mass.
Growth Failure—Dr. John James, Dallas.
Recurring Abdominal Pain—Dr. Baty.
Office Management of Behavior Disturbances—Dr. Bakwin.
Diagnostic Problems; Kodachrome Clinic—Dr. Platou.
Panel Discussion: Common Problems in Pediatric Practice—Dr. Platou, Dr. McNamara, Dr. Bakwin, Dr. Panos, Dr. Baty, and Dr. James.

Reservations in Austin should be made directly with motels or hotels. The meeting is open to all physicians.

Texas Industrial Medical Association

The Texas Industrial Medical Association will hold its fall meeting in conjunction with Houston's Industrial Health Conference for Business and Industry September 27. Registration will begin at 8:30 a. m., and the registration fee of $7.50 will include a luncheon.

Guest speakers will include Dr. Perry C. Talkington, Dallas; Mr. Harry W. Ferguson, Houston; Dr. William P. Shepard, New York; and Robert L. Sutherland, Ph.D., Austin.

In the evening there will be a business meeting followed by cocktails and dinner at the Doctors' Club.

American Public Health Association

A wide variety of topics will be covered during the November 11-18 meeting in Cleveland of the American Public Health Association. More than 40 related organizations will hold simultaneous meetings, and a total attendance of 4,500 is expected.

About 400 papers will be presented during the 75 sessions; quality of medical care, health services for industrial workers, medical care for the mentally ill, community health services for children, weight control in growth and development, mental health and the school-age child, international environmental health, health problems of the aging populations, epidemiology of accidents, water fluoridation, air pollution, health aspects of housing, and community mental health will be among the topics of discussion.

Texan to Speak At Bahamas Conference

Dr. R. Lee Clark, Jr., Houston, will speak before the Fourth Bahamas Medical Conference in Nassau December 1-15. His subject will be "Clinical Aspects of Soft Tissue Tumors" and "The Principles of Cancer Surgery." Other guest speakers will be Drs. Edward E. Avery, Chicago; Bernard B. Brodie, Bethesda; Denis Cavanagh, Miami; J. Maxwell Chamberlain, New York; Claude F. Dixon, Rochester, Minn.; John J. Farrell, Miami; James Henry Ferguson, Miami; William W. Frye, New Orleans; James D. Gallagher, Pearl River, N. Y.; Leonard Gottesman, Cincinnati; Hudson Hoagland, Shrewsbury, Mass.; S. W. Hoobler, Ann Arbor; Earle B. Kay, Cleveland; Chauncey D. Leake, Ph.D., Columbus, Ohio; Thomas W. Mattingly, Washington, D. C.; John C. McClintock, Albany, N. Y.; Marvin Moser, White Plains, N. Y.; Irvine H. Page, Cleveland; Gregory Pincus, Shrewsbury; Paul R. Rosenbluth, Chicago; Roy O. Scholz, Baltimore; Elmer L. Severinghaus, Nutley, N. J.; Donald W. Smith, Miami; G. Arnold Stevens, Beverly Hills; A. Waite Bohne, Detroit; and Henry Zimmerman, Cleveland.

Hotel reservations may be made by writing John L. Cota, General Manager, Fort Montagu Beach Hotel, Nassau, Bahamas. Special hotel rates will be $28 per day for two persons in one room, and $18 per day for one person. Prices include three meals a day. When 14 persons travel together, the airlines allow one free ticket.

NATIONAL ASSOCIATION FOR MUSIC THERAPY

The eighth annual conference of the National Association for Music Therapy, Inc., will be held in East Lansing, Mich., October 10-12 at the Kellogg Center for Continuing Education. The program will be designed to aid persons working with music for children, mental and tuberculous patients, physically handicapped and mentally retarded patients, the emotionally maladjusted, and research.

NEUROPSYCHIATRISTS TO MEET

The Texas Neuropsychiatric Association and the Dallas Neuropsychiatric Association will be hosts to the Central Neuropsychiatric Association in Dallas October 18-19. Dr. Stephen Weisz, Dallas, is chairman of the program committee, and Dr. William P. Shelton, Dallas, is chairman of the committee on general arrangements. There will be no registration fees, and visitors will be welcome.

ACS to Meet in Dallas

A sectional meeting of the American College of Surgeons will be held January 9-11 in Dallas, and subjects for the program range from chemopallidectomy for Parkinson's disease to bomb phenomenology. Dr. Frank H. Kidd, Jr., Dallas, heads the planning committee for the Dallas meeting. Two new features are scheduled for each sectional meeting this year: a fellowship luncheon at which a panel of College officials will answer questions about the entire program of College activities and, in turn, pose questions to the audience; and a social, rather than scientific, dinner meeting, to which program participants, visiting surgeons, wives, and other guests will be invited for an informal evening of entertainment.

Other sectional meetings, scheduled for later in the year, will be in Jackson, Miss.; New York; Salt Lake City; Des Moines; and Stockholm, Sweden. The annual clinical congress will be October 6-10 in Chicago.

ENDOCRINOLOGY AND METABOLISM

The ninth postgraduate assembly in endocrinology and metabolism will be held in Augusta, Ga., October 21-25, and the faculty will consist of 22 clinicians and investigators from various parts of the country in the fields of endocrinology and metabolism. The program will cover the various endocrinopathies, with emphasis on the clinical aspects, demonstration of laboratory tests, presentations of cases, and questions and answers. Registration is limited to 100, and the tuition fee is $100. Residents and fellows will be admitted for $35. This meeting is sponsored by the Endocrine Society, the Medical College of Georgia, and the Medical College of Georgia Foundation, Inc.

MEDICOLEGAL NOTES

Definite Proof Necessary For Malpractice Verdict

The highest court in our state in cases of a civil nature, the Supreme Court of Texas, has spoken but seldom in cases dealing with malpractice, but one of the cases in which an opinion was handed down by the Supreme Court of Texas is a fairly recent one, and is also one of much importance. Such decision was in the case of Bowles et al. v. Bourdon et al.*

This was a suit for malpractice, and the trial judge after hearing the evidence instructed a verdict in favor of the defendant physician. The patient appealed this decision of the trial court to the Court of Civil Appeals which affirmed the trial court's action.† The patient then appealed to the Supreme Court of Texas.

The chain of events which gave rise to this suit for malpractice began on July 16, 1941, when Harry Bowles, a boy 4 years old, fell and fractured his left elbow just above the joint. An hour later the defendant physician examined the boy's elbow by x-ray. Discovering the fracture, the physician administered an anesthetic and set the injured arm. When the fracture had been set, the physician brought the lower arm up against the upper arm and then bound them together by wrapping tape and bandage around them to form a cone shape. When this was finished, another x-ray was taken to determine if the bones were still in proper alignment. Before the above procedures had been performed, there had been some hemorrhage with blueness around the elbow with some swelling of the arm. It was also shown that prior to these procedures, there had been no pulse, but subsequent to the procedures the pulse could be felt.

The parents of the boy and others testified at the trial that some 4 hours after the elbow had been set it was discovered: "His hand was turning blue and his fingernails were very purple. His fingers and hand were cold, it seemed like all the circulation was leaving his hand and naturally it turned cold and blue." Also, there was further testimony indicating that the boy was in pain.

The facts further show, by the parents' testimony, that the mother then telephoned the physician and told him that the hand was "awfully blue and ice cold" and asked if the bandage could be too tight, "because the hand was so cold." The mother then testified that the physician stated the hand was all right and that she should not worry about it, but to bring the boy in the next day for examination. The physician stated in a deposition taken prior to trial that he recalled the conversation in part, but did not recall any mention of the hand being discolored and cold. He said, "I think if that had been mentioned, that was too serious for me not to remember. I think I would remember it if it had been brought home to my attention." The only part of the conversation with the mother that he remembered was that the boy was suffering pain, which he said was to be expected. He further testified, "If I had understood that, I would either come over or had them meet me at the hospital, because there would be no excuse for not seeing a patient who had an ice cold hand."

When the parents took the boy to the physician's office the next morning, the mother asked about the hand. She testified that the physician said he thought the bandage was too tight and "snipped it a little on both sides."

The boy was examined almost every day for the first week following the accident, and thereafter until August 21 about twice a week. The mother testified that about 2 weeks after the arm had been set she asked the physician why the boy was unable to move his fingers, and that his hand looked sort of blue, and that the physician had said nothing was wrong with the hand. She further testified that on August 21 she again called the physician's attention to the boy's fingers, and he said, "Hasn't he been able to move them?" and that she replied, "No, I thought you knew."

As a result of this discussion between the physician and the boy's mother, a bone specialist, Dr. Bloom, was called in by the defendant physician. Dr. Bloom testified that on August 21 when he first examined the boy, he found a healing or healed fracture of the upper arm with a Volkmann's contracture of the left forearm, and that the characteristics of the contracture were visible in a claw hand, a considerable wasting of the muscles which draw the hand to make a fist, and lack of control over the fingers.

It was alleged in the trial of the case that the physician was negligent (1) in binding the area so tightly as to stop blood circulation thereby bringing about the contracture, (2) in not examining the arm and in not loosening the bandage when notified some 4 hours after setting the arm that it was blue and the fingernails purple, and (3) in failing to recognize or treat the contracture between July 16 and August 21, when Dr. Bloom took over the case.

The judge of the trial court instructed a verdict for the physician after the evidence had been presented on the grounds that the plaintiff had failed to support his allegations of negligence "with proper or sufficient expert testimony showing negligence on the part of the defendant, . . . and had failed to show that defendant's negligence, if any, was the proximate cause of plaintiff's injury and damage."

It developed during the trial of the case and subsequently upon appeal, that the plaintiff was relying for the most part

*219 S.W. (2d) 779 (1949).
†Bowles v. Bourdon, 213 S.W. (2d) 713.

upon the theory that the physician had been negligent in having the bandage too tight, and that such act was the cause of the contracture. There was extensive testimony upon this point by the defendant physician, Dr. Bloom, and another physician who was called to testify on behalf of the plaintiff. Many of the questions posed to the physicians dealt with what was the cause of the Volkmann's contracture with the view undoubtedly in mind by the plaintiff's attorney to establish that a tight bandage was the probable and likely cause of the contracture. The answers in the testimony of the physicians ranged from the statement that there was doubt and uncertainty in the medical profession as to the exact cause of a contracture of this nature, to a reply that a tight bandage "might" or "possibly" could have been the cause.

The first point which was discussed by the Supreme Court in its opinion dealt with the elements that the plaintiff in a malpractice case must establish. The decision read, in part, "It definitely is settled with us that a patient has no cause of action against his doctor for malpractice, either in diagnosis or recognized treatment unless he proves *by a doctor of the same school of practice as the defendant* (italics ours), (1) that the diagnosis or treatment in question was such as to constitute negligence, and (2) that it was the proximate cause of the patient's injuries."

In commenting upon the evidence which had been presented in the attempt to show the cause of the contracture the court stated, "As a circuit judge in Ohio, Chief Justice Taft clearly stated the principle, with the reason supporting it, in these words: 'When a case concerns the highly specialized art of treating (disease), with respect to which a layman can have no knowledge at all, the court and jury must be dependent on expert evidence. There can be no other guide, and, where want of skill and attention is not thus shown by expert evidence applied to the facts, there is no evidence of it proper to be submitted to the jury. Again, when the burden of proof is on the plaintiff to show that injury was negligently caused by the defendant, it is not enough to show the injury, together with the expert opinion that it *might* (italics ours) have occurred from negligence and many other causes. Such evidence has no tendency to show that negligence did cause the injury.‡ And, if his is a recognized school of good standing with established rules and principles of practice for the guidance of its members, the accused doctor "is entitled to have his treatment of his patient tested by the rules and principles of the school of medicine to which he belongs, and not by those of some other school, because a person professing to follow one system or school of medicine cannot be expected by his patient to practice any other, and if he performs the treatment with ordinary skill and care in accordance with his school of practice, he is not answerable for bad results.'"‖

The Supreme Court, in further comment upon the evidence presented in this case, stated: "All it shows is that what respondent (physician) did was not a *probable* but a *possible* cause of the contracture; that it was only one of several things that *could* have caused the injuries complained of" (all italics ours but the last one—it was in italics by court).

"And if the plaintiff would rest upon inferences rather than upon direct evidence, he meets the same rule." The proof must establish causal connection beyond the point of conjecture. It must show *more than a possibility.* Verdicts must rest upon *reasonable certainty of proof.* Where the proof discloses that a given result *may* have occurred by reason of more than one proximate cause, and the jury can do no more than guess or speculate as to which was, in fact, the efficient cause, the submission of such choice to the jury has been consistently condemned by this court and other courts."§

‡*Ewing et al v. Goode, 78 Fed. 442.*

‖*41 Am. Jur., p. 203, sec. 85, citing Floyd v. Michie (Texas Civ. App.), 11 S.W. (2d) 657.*

§*Ramberg v. Morgan, 218 N.W. 492.*

This decision by the Supreme Court of Texas firmly establishes two basic principles for the courts of our state to follow. First, it is essential that the plaintiff show by expert testimony that the defendant has been negligent and such expert testimony must be given by one who is a member of the defendant's own school of medicine. Second, the evidence introduced by the plaintiff to sustain an action for malpractice must be of the nature to show "reasonable probability," and if it only shows "possibility," it will not suffice.

—PHILIP R. OVERTON, LL.B.

Workmen's Compensation Amendments Affect Doctors

The fifty-fifth Texas Legislature brought about major changes in the Texas Workmen's Compensation Act. Some of these changes are of interest to members of the Texas Medical Association who treat injured workmen under that law, the Committee for Liaison with Workmen's Compensation Insurance Companies points out.

The most important changes from the medical standpoint are (1) maximum weekly indemnity increased from $25 to $35; (2) medical benefits extended from 91 days to such period as the nature of the injury may require; and (3) compensation for partial incapacity resulting from general injuries to be computed on a wage loss factor rather than, as formerly, on a percentage of disability.

Medical Services.—Section 7, Article 8306 as amended, abrogates the provision restricting medical services to 91 days from the date of the injury and provides that the insurance carrier: ". . . shall furnish such medical aid, hospital services, . . . as may reasonably be required at the time of the injury and at any time thereafter to cure and relieve from the effects naturally resulting from the injury. . . ." Original jurisdiction to pass on all questions pertaining to disputes that might arise incident to rendering treatment under the act is vested in the Industrial Accident Board. Procedural changes, particularly with reference to limitations on the time within which matters pertaining to medical treatment must be presented to the Industrial Accident Board, are included in an amendment to Section 5 of Article 8307.

Silicosis and Asbestosis.—Section 26(d), Article 8306, limits the liability of the insurance carrier for treatment of incapacity from silicosis or asbestosis to a period of 91 days.

Partial Incapacity.—Section 11, Article 8306, governs the benefits due for partial incapacity when the partial incapacity results from a general injury. The amendment to this section is the one which most vitally concerns the medical profession and which will require the greatest deviation from the procedures heretofore followed, the committee emphasizes. General injuries are those which involve the body as distinguished from specific injuries (listed in Section 12) which involve the extremities or the senses. Section 11 requires that benefits due for partial incapacity resulting from a general injury be computed on the basis of 60 per cent of the difference between the average weekly wage before the injury and the average weekly wage earning capacity during the existence of such partial incapacity. This is a wage loss concept as distinguished from a concept of functional or physical disability. Therefore, benefits are now to be computed on the basis of the diminution of earning capacity as distinguished from a percentage of disability. Whether such partial incapacity is temporary or permanent, the formula remains the same but involves averaging the wage earning capacity over the period of disability. The amendment specifically prohibits the use of a percentage of disability as a basis for computing benefits under this sec-

tion and thus renders medical reports in terms of such percentages completely worthless.

The physician's role remains the same in that he is still asked to supply medical information. The determination of the previous earnings and the determination of the earning capacity during the existence of partial incapacity is not the responsibility of the physician, but he is the source of the medical facts which must be considered in arriving at the latter figure.

The objective to be arrived at, ultimately, is the diminution in the value of the services of the injured workman on the labor market as reflected by his inability to earn full wages because of incapacity resulting from his injury. The test takes into consideration the type of work for which the particular injured workman is suited by reason of his age, previous training and experience, special knowledge, and the vicinity in which he resides. The agencies having responsibility for making a fair computation of the benefits due for partial incapacity, either permanent or temporary, which results from a general injury are interested in the following medical information:

1. Any previously existing defects which may affect the capacity to earn wages.
2. Any changes due to age and other factors not connected with the injury.
3. Presence of any anatomical or structural defects resulting from the injury.
4. Any functional changes due to the injury.
5. Any loss of efficiencies as a result of the injury in (a) endurance, (b) speed, (c) strength, (d) coordination.
6. Any reduction in ability to pass preemployment examinations.
7. Specific tasks of which the patient is capable, specific tasks of which the patient is incapable, and specific tasks of which the patient is capable only in part.
8. Subjective changes.

Without information of this nature, it is practically impossible to arrive at any accurate estimate of the loss of earning capacity, the committee states. Before the law was amended, medical reports which related only the disability of an injured workman were adequate. The amendment now will require, in addition to that information, the medical findings with respect to the ability or capacity to work. The report should include the tasks or functions which are capable of being performed as well as those which may not be performed. If the analysis of the abilities and inabilities of the patient is to be useful and informative, it is necessary for the physician to obtain the injured workman's history, his experience and training, the type of work for which he is suited, and the physical requirements of such work.

Specific Injuries.—The information which the physician must furnish with reference to specific injuries (Section 12, Article 8306) is not changed by the recent amendments, although those who must compute the benefits are required to use a different formula. Benefits due for specific injuries are on a different basis from those resulting from general injuries. Benefits are payable for specific injuries, regardless of whether or not the injured workman loses any time from his work and regardless of whether or not he suffers any loss of wages or wage earning capacity. Section 12 requires medical reports with respect to the loss of a specific member or the loss of use of a specific member or sense. Total loss or loss of use of an extremity or sense should not present any difficulty. However, a partial loss involves a determination of the extent of physical limitation in the use of the specific member. Loss of use may be permanent or temporary, and the report should include an accurate estimate of the amount of functional loss which is present at the time stated in the report, the expected improvement, and the degree of residual or permanent loss which is anticipated.

General Responsibility.—In general, the physician always should report promptly the date on which the injured workman will be capable of returning to work, whether to full duties or to light duty, and if to light duty, the date he should be able to resume his full duties.

When it is observed that an injured workman is a proper candidate for vocational rehabilitation, this fact should be reported promptly to enable the interested agencies to perform their various functions as provided in Section 7, Article 8306.

Further Information.—Additional details of the workmen's compensation amendments will be mailed to Texas physicians by the committee.

OF GENERAL INTEREST

Personals

Dr. John B. Cummins, Fort Worth's 98 year old physician, was pictured in a double page spread in the August issue of *MD,* medical newsmagazine.

Dr. James T. Mills, Dallas, spoke on "Surgical Problems Involved in the Repair of the Extensive Neck Contractures" at the recent meeting in Chicago of the International College of Surgeons. *Dr. William K. Wright,* Houston, was a panel member on the program of the International College of Surgeons. His group considered "Myringoplasty and Tympanoplasty for the Improvement of Hearing in Non-Otosclerotic Conductive Losses."

Dr. Saul Kit, Houston, has received a grant from the Leukemia Society, Inc., for his project, "The Incorporation of Labeled Compounds into Desoxyribonucleic Acid Thymine (DNA-T) by Normal and Malignant Lymphatic Tissues."

Dr. James N. Lang, Sherman, accompanied the Austin College Choir on its five week concert tour of Europe during August. They visited the Netherlands, Belgium, Paris, Western Germany, Austria, Italy, England, and Scotland.

Dr. John E. Skogland, Houston, was in Chicago in July for a meeting of the American Congress on Legal Medicine and Law-Science Problems. He presented papers on "Contributions and Limitations of Electroencephalography in Head Injury Cases" and "Mechanisms by Which Pain or Headache May Be Produced by Craniocerebral Trauma."

Dr. Ben Withers, Houston, recently returned from England where he read papers before the University of London Post Graduate School, London, and the Eye, Ear, Nose, and Throat Section of the Royal Society of Medicine held in Bristol.

Dr. John A. Wall, Houston, addressed the American Association of Obstetricians and Gynecologists in September on "The Team Approach in Endometrial and Cervical Neoplasia."

Induction of Doctors And Dentists Postponed

The Department of Defense has issued a bulletin stating that it does not expect to place a call on the Selective Service System for physicians or dentists during the current fiscal year. Whenever a physician or dentist is classified as available for service, the local board shall delay issuance of his order to report for a physical examination or, if such an order already has been issued, it will be canceled. Orders to report for induction likewise will be postponed or canceled. This bulletin was issued August 19.

"Come Hell Or High Water"

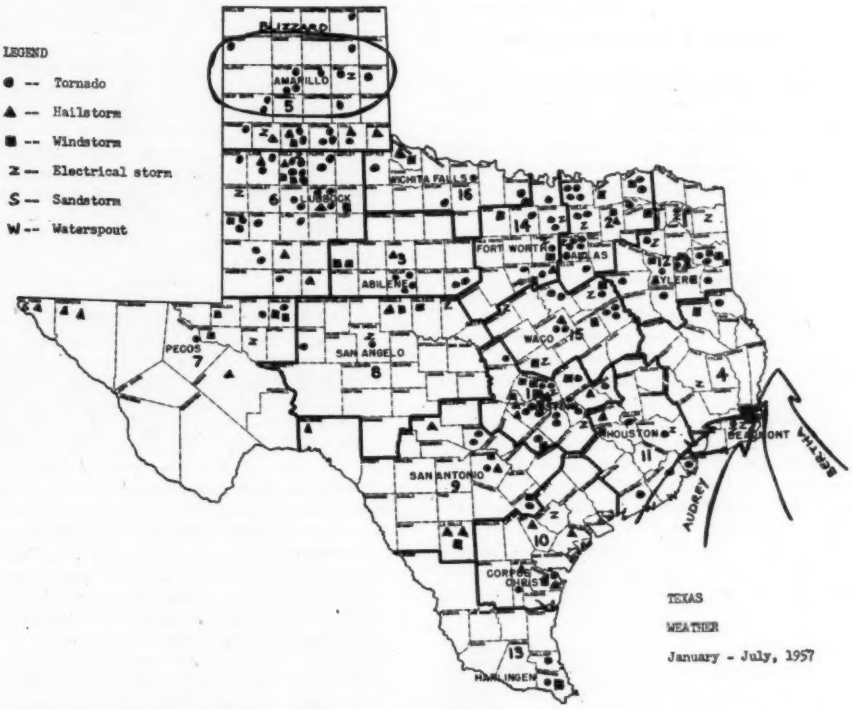
From the buffeting she received the first half of this year, Texas might have been Mother Nature's stepchild. In January, 244 of the state's 254 counties were listed as drouth disaster areas eligible for federal aid. From February 16 through June, at least 121 tornadoes touched ground somewhere in the state—five of them being classified as major tornadoes. Beginning in mid-April, 13 river basins were affected by floods. A late blizzard in the Panhandle in March and the lashing tail of Hurricane Audrey on the coast in June added to the season's disasters. At least 61 deaths, more than 600 injured, and property damage exceeding $100,000,000 have been charged to turbulent weather by William L. McGill, state coordinator of defense and disaster relief; 65 counties and 90 cities have requested federal assistance under Public Law 875.

And where were Texas doctors? In the thick of the fight to keep mortality and morbidity figures at the lowest possible levels.

Hurricane Audrey

Take Hurricane Audrey. Early reports from the United States Weather Bureau warned that the disturbance boiling up in the Caribbean likely would strike hardest in the area from Orange to Galveston. Physicians and hospitals, as well as Red Cross, Civil Defense, and others, began readying for the blow. Although the hurricane veered to the east, wreaking its greatest fury in Louisiana on June 26 and 27, many Texans were evacuated and given mass care in designated shelters—850 in Beaumont, 10,000 in Port Arthur, 8,000 in Orange, 850 in Galveston. Whereas the death toll in Louisiana exceeded 500, Texas had only 9 deaths and less than 250 injuries, mostly minor, from the hurricane.

It was natural, therefore, for the physicians and nurses who had expected to care for casualties to offer their services to their neighbors across the state line. Dr. R. S. Browne and Dr. T. B. Sappington of Port Arthur and Dr. Darwin D. Moore, Dr. L. M. Williams, and Dr. M. T. Danak of Beaumont together with some nurses spent up to two days assisting in Cameron, La. Other Texas volunteer workers were provided with first aid supplies, especially snake bite kits, were given typhoid immunization, and left for the devastated area to help. Antityphoid injections were given a number of residents of Texas, especially the Sabine-Sabine Pass area, as a precautionary measure, and chlorine dosages in the water supplies were increased to compensate for possible minor breaks and back-siphonage although none were observed and water service was maintained.



Few areas of Texas were spared from some aspect of severe weather the first half of 1957. The map, prepared in the Division for Defense and Disaster Relief, Austin, shows at least some of the worst hit locations.

After the worst of the ordeal was over, the Jefferson County Medical Society investigated the situation in Cameron and voted to assess members of the society to provide a minimum of $1,000 to help Dr. Cecil W. Clark, the Cameron physician who lost three children, as well as his home, office, and automobile, in the hurricane, to reestablish himself.

As a footnote to the Hurricane Audrey story, Harry Moore, Ph.D., University of Texas sociologist who directed studies of the San Angelo and Waco tornadoes several years ago,

surveyed the Louisiana scene and reports that one of the chief causes of the large number of deaths from Audrey was the strange failure of communication between the Weather Bureau and the people. Psychologically, the fishermen and trappers of the Louisiana marshland were conditioned to storms and dangers. They listened to the weather reports, which warned of violent winds as warnings year after year had done; they failed to grasp the full significance of these amazingly accurate reports and did not try to get out in time. (When Hurricane Bertha was announced a few weeks later in the same area, evacuation was prompt.) Psychological conditioning—mental and emotional response—is an aspect of disaster that physicians as well as sociologists must confront.

Contributions to help Dr. Cecil W. Clark of Cameron, La., reestablish his practice following severe losses in Hurricane Audrey may be sent to Jefferson County Medical Society, P. O. Box 253, Beaumont, or to Cameron Parish Medical Rehabilitation Fund, Louisiana State Medical Society, Room 105, 1430 Tulane Avenue, New Orleans 12.

Lampasas Flood

Although confined in a much smaller area, the Lampasas flood May 12 was as spectacular in its own way as Hurricane Audrey. Fortunately, the loss of life totaled just 5 with only a score being hospitalized, but 90 per cent of the business district was destroyed and 310 homes were damaged or destroyed. Electricity was knocked out; raw sewage was dumped into swollen creeks; most telephones were useless. The local hospital and its staff were able to care adequately for flood victims, although nearby Burnet and other cities offered help if needed. (The Shepperd Memorial Hospital at Burnet had a disaster plan patterned after those in Dallas and San Francisco but modified to meet the needs of a small hospital ready to put into effect when necessary.)

Dr. W. M. Brook and three passengers in Lampasas had started in Dr. Brook's car to see the flood situation when rapidly rising water caught them. The car stalled and was smashed into the side of a building, where it hung briefly before being swept away. All of the passengers managed to escape. Dr. Brook was washed into a tree from which he later swam to higher ground, but he lost a $100 bill and a $50 bill from his pocket. Less than 12 hours later, the $100 bill was returned by a Fort Hood soldier who had come to help in rescue work. The doctor rewarded the soldier with $20 and donated the remaining $80 to the Red Cross relief fund.

A damaged house swept into the street, leaning telephone poles, rubbish washed into odd places, standing water, and dazed people are the aftermath of the Lampasas flood. (Photograph by State Department of Public Safety.)

Fort Hood personnel and equipment did much to clean up the flood devastated town, disposing of spoiling foodstuffs and decaying carcasses of animals that were health hazards. Tank trucks provided by the Texas National Guard and the Texas Highway Department furnished emergency supplies of water. The Red Cross operated mobile canteens and two refrigerator trucks provided by private industry. Typhoid, tetanus, and poliomyelitis immunization was provided by the State Department of Health, and the local health officer, Dr. Rush McMillin, spent 10 days after the flood away from his private practice helping to coordinate cleanup operations necessary to avoid contagion. Dr. McMillin points to delay in receipt of syringes and antitoxin, the desirability of an administrator from state or federal agencies to work with the local health officer, and the need to formulate a plan by which civilian facilities might be substituted for Army equipment in wartime disasters as worth consideration for the future.

Silverton Tornado

A few days after Lampasas was inundated, the 1,500 people of Silverton witnessed a torrential downpour of rain followed by 10 minutes of hailstones the size of golf balls. Then a tornado struck. The main force was directly south of the business district, where 20 homes, a gin, and an elevator were reduced to rubble. Let Dr. Crawford H. Black of the stricken town speak:

"When I arrived at the hospital, three people were waiting for me. In the next few minutes, six dead babies were brought in, their deaths resulting from multiple head fractures. The hospital was without lights and water, and as more injured people poured in, the hospital was turned into a clearing and first aid station. Pain was prevalent, but there was very little bleeding, perhaps because of the lowered blood pressure and shock. These patients were cleaned; some were given seconal sodium, and some were given sodium pentothal intravenously. They were then sent on to surrounding hospitals [in Amarillo, Plainview, Lubbock, Tulia, and Dimmitt] after their shock had abated somewhat."

Dr. Black emphasizes the need for more preparation for such potential disasters and for teamwork within the community. "Sufficient warning is necessary," he stresses, "so the potential victims can protect their heads as it seems that head injuries in these disasters occur more frequently than any other type of injury, and I observed that the lighter and smaller the person, the worse the head injury. I would strongly advocate the use of head helmets for those who do not have ready access to basements or dugouts." He praises the cooperation of the neighboring towns and the ambulance service provided by them.

Dead in Silverton? Twenty-two. Injured? Eighty.

Proof that preparedness and teamwork do mean a saving in life and health in time of disaster was given when metropolitan Dallas was struck by a tornado April 2. A detailed emergency plan was in operation within minutes. The staff of Parkland Memorial Hospital handled 176 injured, lost 3 other victims, and received 7 bodies; Methodist Hospital received 18 patients, and the emergency staffs of Baylor and St. Paul Hospitals were on a standby basis if needed. (Further details of the Dallas disaster were published in the May issue of the *Journal*, page 352.)

Universal Problem

The Victoria County Health Unit director, Dr. Roy G. Reed, states one problem typical of those encountered in almost every section of Texas this spring:

"The one broad public health problem which arose throughout the county and by which we received some $25,000 under Public Law 875 was hordes of mosquitoes. Species isolated were capable of transmitting encephalitis and malaria, or were just plain pest varieties. This menace to health and happiness was controlled through a City-County concerted effort of larviciding and adulticiding with DDT in oil and BHC powder, application being made by plane and ground power equipment.

"One other major problem," Dr. Reed mentions, "which gave us concern was the many private water wells which were inundated by both Guadalupe River overflow and heavy rainfall. All individuals using water from these wells were warned by radio and press to chlorinate or boil all water for household use until such time as individual wells were proven by laboratory procedure to be furnishing potable water. Fortunately, we had no typhoid fever or diarrhea chargeable to flood polluted drinking water."

Typical of the destruction wreaked by the tornado at Silverton are the remains of this house, where searchers check to be sure no one was buried in the debris. (Photograph by Richard Pipes, *Amarillo Daily News.*)

The State Department of Health reports, Dr. T. E. Dodd, civil defense and emergency medical service liaison officer there, has been asked to carry on 64 vector control programs and 23 projects for the repair of water plants, sewerage systems, and water well purification. In most of these same areas, immunization programs of some sort were instituted as well.

Dr. Dodd quotes Dr. E. Aubrey Cox of Wichita Falls as saying that by the time power equipment, dust, spray, and labor crews could be mobilized there, mosquitoes were being reported as "so many per square foot of air space." At the same time, physicians were at work protecting the people of Wichita Falls from typhoid, for the flood water entering sewer mains boiled out from manholes all over town "contaminating everything." Much the same situation occurred in Haltom City, Hurst, White Settlement, and Richland Hills in Tarrant County, and in many cities and counties across the state, yet the diligence of medical men prevented epidemic of enteric diseases. For example, Dr. Carl H. Whalen and his colleagues in Weatherford—typical of Texas doctors, Dr. Dodd comments—sent word to flood victims in towns along the Brazos River where there were no physicians to report to any of their offices for protective inoculations without charge.

Dr. Dodd emphasizes that there were no cases of tetanus despite the many lacerations and puncture wounds during the tornadoes and during the clean-up after tornadoes and floods. He attributes this to the quality of care and good judgment practiced by physicians in the disaster areas.

Following the severe weather, reports of fevers of any cause in mounting numbers of cases were watched closely, Dr. Dodd relates. The possibility of encephalitis in particular was kept in mind. Studies in the Tyler-Smith County area and in the Lubbock area were negative. However, early in August, the physicians of Cameron County noted 19 cases of clinically diagnosed encephalitis, and laboratory studies confirmed the diagnosis. Control measures directed at the carrier mosquito were instituted, but the disease continued to spread to near epidemic proportions.

Disaster and Physicians

Although Texas has the sorry distinction of ranking first in the nation in the number of all major disasters and this year's disasters already have cost the equivalent of nearly $12 per man, woman, and child, its citizens as individuals or as organizations, Civil Defense groups, Red Cross workers, state agencies, federal units stationed in Texas or sent in as needed —all working together make the best of bad situations as they arise. Physicians are no exception.

Dr. Raymond F. Barnes of St. Louis, medical director for the midwestern area of the American National Red Cross, sums it up thus:

"As to the reaction by physicians in these disasters, it has been my observation that they have in all cases responded immediately and voluntarily, even coming in from surrounding communities without call, and have done all possible to relieve pain and give proper treatment to the victims until all are cared for and those hospitalized who needed to be.

"Admittedly, in some communities the pre-disaster planning is better than in others and the doctors are a definite part of such planning. In all cases, however, the doctors and hospitals have done their very best regardless of personal comfort, fatigue, or working conditions.

". . . Certainly, there were instances in all these disasters [including the Texas City explosions and other disasters before 1957] where conditions made medical care difficult, where transportation mix-ups occurred, and even where lack of pre-disaster planning and organization were evident, but this has been the case in every disaster everywhere and probably will remain so in some degree in spite of all precautions. On the whole and in all sincerity . . . I have nothing but praise for the response, the efficiency, and the tireless efforts of the Texas doctors in the disasters that have occurred in your state in the past fourteen years."

May it ever be so.

EDUCATION

Postgraduate Courses

American College of Physicians—A 31 page booklet describing various courses offered through the American College of Physicians during autumn and winter throughout the country is available from the executive secretary, E. R. Loveland, 4200 Pine Street, Philadelphia 4. These courses are made available by the college to its members at a minimum cost, but where facilities are available, the courses will be open to nonmembers.

Occupational Skin Problems—Cincinnati, October 28-November 1—This course is sponsored by the University of Cincinnati, Department of Preventive Medicine and Industrial Health. Registration fee will be $100. The program

will be divided into five daily sessions consisting of didactic lectures and clinical demonstrations, field instruction in industrial plants, and panel discussions. The Secretary, Institute of Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19, will accept reservations.

New York University-Bellevue Medical Center Postgraduate Medical School Courses, New York, October and November—Postgraduate courses will be available during the month of October in the following departments: anesthesiology, dermatology and syphilology, industrial medicine, medicine, neurosurgery, obstetrics and gynecology, orthopedic surgery, pathology, pediatrics, physiology, radiology, and surgery. During November, courses will be offered in the departments of medicine, obstetrics and gynecology, ophthalmology, otorhinolaryngology, and pediatrics. Details may be obtained from the Associate Dean, 550 First Avenue, New York 16.

Gastroenterology, Houston, October 4-5—Newer trends in treatment of diseases of the digestive tract will be emphasized, and Dr. John Kelsey will be the instructor in charge. Fifteen hours of credit will be certified for general practitioners who desire this, and inquiries concerning the course should be directed to the Dean, University of Texas Postgraduate School of Medicine, 410 Jesse Jones Library Building, Texas Medical Center, Houston 25.

Southwestern Medical School, Dallas—Courses on internal medicine (metabolism and endocrinology), surgery (the gastrointestinal tract), obstetrics and gynecology, and pulmonary diseases will be offered at the University of Texas Southwestern Medical School during 1957-1958. Ward classes, which consist of one afternoon weekly throughout the year, will be conducted in pediatrics, cardiology, metabolic diseases, pulmonary diseases, and psychiatry. For further information and applications, write Dr. John S. Chapman, Assistant Dean for Postgraduate Education, 5323 Harry Hines Boulevard, Dallas 19.

University of Texas Medical Branch

Dr. Walter O. Klingman, formerly professor of neurology and psychiatry at the University of Virginia, now is professor of neurology at the University of Texas Medical Branch. The new chairman of the Department of Bacteriology is Dr. Willard F. Verwey, formerly director of bacteriological research for Sharp and Dohme Laboratories, Philadelphia.

Drs. Arild Hansen and Theodore Panos gave a report on essential fatty acids at the International Congress of Biochemistry at Oxford in July. They traveled on to Paris to attend the International Congress of Nutrition, and planned to spend a few weeks in Greece. Other travelers in Europe are Dr. and Mrs. Sam R. Snodgrass.

Baylor University College of Medicine

The National Foundation for Infantile Paralysis has awarded a $16,808 grant to Baylor University College of Medicine, Houston, for study of the cause of upsets in metabolism observed among paralyzed poliomyelitis patients.

Dr. Joseph H. Gast, professor of biochemistry at Baylor University College of Medicine, Houston, received the Ernst Bischoff Award for 1957; it is given annually to a person who has distinguished himself by achievement and devotion and has helped solve the chemical problems which arise daily in the practice of medical arts. The award was made in New York in September at the time of the American Chemical Society meetings.

MEMORIAL LIBRARY

MEDICAL ECONOMICS BIBLIOGRAPHIES

III. Medical Fees

If medical fees of today seem outrageous, compare them with these phenomenal fees of the eighth century. Gabriel Batischua received from Harum al-Rashid $1,500 a year "for bleeding and purging the Commander of the Faithful" plus a monthly salary of $2,500 and a New Year's purse of $6,250. He later received $125,000 to heal Al-Meismun (possibly the largest fee on record). Another Arabian, Abu Nasr, received more than $60,000 for curing one of the Caliphs of stone.*

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Gifts to the Library

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Dr. Josephine Dunlop, Austin, 6 journals.
Dr. Lee E. Edens, Austin, 60 journals.
Dr. James M. Graham, Austin, 66 journals.
Dr. J. O. S. Holt, Jr., Dallas, 2 tape recordings.
Dr. F. T. McIntire, San Angelo, 62 journals.
Mrs. Walter McNeill, Austin, 5 books.
Philip R. Overton, Austin, 8 journals.
Dr. A. D. Pattillo, Austin, 41 journals.
Dr. Nelson L. Schiller, Austin, 47 journals; 30 reprints.
Dr. Claude A. Selby, Sinton, 555 journals.
Dr. Howard O. Smith, Marlin, 169 journals; 11 books; reprints.
Dr. B. O. White, Austin, 23 journals.

★ Motion Pictures

Health Careers

Black and white, sound, 13 minutes, cleared for television showing.

This film introduces its audience to more than 30 health workers. It opens the door on typical health services—the places where these and other health workers do their actual jobs. But the film is designed only as a first quick sampling—a question raiser. The Health Careers Guidebook, to which the film is a companion-piece, covers these and many other career opportunities throughout the health field—156 all told!

None for the Road

Black and white, sound, 15 minutes.

Produced in collaboration with the Yale Center of Alcoholic Studies, this film deals with the vital problem of teenage drinking and driving by dramatizing the story of a teenage group that includes a nondrinker, a moderate drinker, and a heavy drinker, stressing the fact that alcohol in *any* amount is dangerous for the auto driver. (Young America Films, Inc.)

★ Books

BOOK NOTES

Chemosurgery in Cancer, Gangrene and Infections

FREDERIC E. MOHS, M.D., Associate Professor of Chemosurgery, Department of Surgery, University of Wisconsin Medical School, Madison. 305 pages. $13.50. Springfield, Ill., Charles C Thomas, 1956.

This remarkable book was not published prematurely, for the author is acutely aware of the history of this type of treatment as is indicated in his introductory statements of acknowledgment. The author is a man of vision and ability who worked out a solution to the advancement of this modality through cooperative effort between the departments of surgery and dermatology extending over a period of 20 years. Dr. Mohs has set a pattern of scientific accuracy and completeness in his work which has gained respect and admiration throughout the world.

The modalities used require considerable clinical training and experience, and without adequate and skillful guidance in the learning of the techniques employed, one could get into serious trouble.

The removal of lesions by these modalities is an important addition to our armamentarium, not only for the control of malignant lesions but also for selected cases of gangrene and infections. However, only when one has been well indoctrinated in the utilization of these methods should this mode of treatment be undertaken.

The material is well presented and illustrated and is recommended reading for anyone who has to do with the treatment of malignant disease.

—Joe C. Rude, M.D., Austin.

Christopher's Textbook of Surgery

LOYAL DAVIS, M.D., Chairman of the Department of Surgery, Northwestern University Medical School, Ed. ed. 6. 1484 pages. Philadelphia, W. B. Saunders, 1956.

The preceding five editions of this textbook over the past 20 years have had as their purpose the presentation of authoritative articles by experienced teachers on specific topics of interest in surgery. This aim of Dr. Frederick Christopher has been maintained by Dr. Davis. The editor has surrounded himself with 86 distinguished contributors in preparing the new edition. The text reflects their clinical insight, their experience and skill, and conclusions. An excellent review of the history of surgery is the opening chapter, and the final chapter sums up the qualifications of a surgeon.

The Official American Medical Association Book of Health

W. W. BAUER, M.D., chief editor, *Today's Health*, Ed. 320 pages. Dell First Edition, New York, Dell Publishing Company, 1956.

Notes on Atomic Energy for Medical Officers

Royal Naval Medical School, Alverstoke, Hampshire, England. 169 pages. $4.75. New York, Philosophical Library, 1956.

Muscle Relaxants in Anesthesiology

FRANCES F. FOLDES, M.D., Director, Department of Anesthesia, Mercy Hospital; Associate Professor of Anesthesiology, University of Pittsburgh, School of Medicine, Pittsburgh, Pa. 210 pages. $5.50. Springfield, Ill., Charles C Thomas, Publisher, 1957.

This monograph in the Bannerstone Division of American Lectures in Anesthesiology maintains rather well the general level of excellence of its predecessors in this series. Dr. Foldes first presents an excellent resume of the known history, chemistry, physiology, action, and pharmacology of the muscle relaxants. He then proceeds to a discussion of their relative clinical values and describes the standard techniques for their utilization in anesthesiology per se as well as in general medical diagnosis and therapy.

This volume is extremely well documented with more than 400 references. This makes it of unusual value to the research worker or student but by the same token makes it just a little burdensome to the average clinical reader. The discussion of the use of succinylcholine is the best part of this work and reflects Dr. Foldes' obvious preference for this agent. The author's stress of the inherent safety in assisted respiration as contrasted to controlled (apneic) respiration is to be genuinely commended. It was somewhat surprising to this reviewer, however, to find that the importance of a complete knowledge of "classical" agents and techniques was not stressed as a mandatory prerequisite to the orderly and rational usage of muscle relaxants as adjuvants to the artistic and scientific conduct of modern anesthesia. Without this basic knowledge the present day anesthesiologist may find himself in a position best summed up by an elderly East Texas general practitioner. This physician was asked to comment on an anesthesia death presented for discussion at hospital staff conference. The old gentleman arose, scratched his head thoughtfully, and then grudgingly said: "It appears to me that this patient had too much of something." Present day polypharmacy has its merits but must be based on sound pharmacology to govern the route, dosage, and timing of administration of any and all agents used.

This volume is clearly printed and easily read. Its main drawback is the somewhat cumbersome plethora of bibliographical references. There are some seven printing errors, but these are of only minor importance. Dr. Foldes' book can be recommended as a useful addition to all institutional and research libraries as well as to the personal libraries of physicians who administer or are interested in the administration of these extraordinarily useful but simultaneously lethal drugs—the muscle relaxants.

—James S. Reitman, M.D., Laredo.

Gynecologic Therapy

WILLIAM BICKERS, M.D., Attending Gynecologist to Richmond Memorial, Retreat for the Sick, Sheltering Arms, Richmond Community and Evangeline Booth Hospitals, Richmond, Va. 158 pages. $4.25. Springfield, Ill., Charles C Thomas, Publisher, 1957.

As indicated in the title, this book is a work emphasizing treatment and management of virtually every gynecological problem which might be encountered. It is presented in a very concise and succinct form. For the most part, the portions devoted to description, pathology, and etiology in each section are held to a minimum. It is not a textbook on gynecology and obviously was not intended as such. There are no illustrations, but if this is a disadvantage, it is offset by the fact that there are neither graphs, charts, nor statistics.

The subject matter is divided into chapters on an anatomical basis except for the latter chapters, which are devoted to various specific conditions seen frequently enough to warrant individual discussion. This follows a classical pattern for books on this subject.

The first chapter deals with the gynecopathy of the vulva and introitus. The general format of the chapters that follow is set here in that more emphasis is placed on treatments and medical regimens rather than on techniques of surgery. If the treatment is surgical, this is often indicated in one word —*excision.*

The section devoted to the cervix is particularly comprehensive. Cytological diagnosis by Papanicolaou technique is emphasized as a valuable screening method. Stress is placed on irradiation as the treatment of choice for most cases of epidermoid carcinoma of the cervix.

The chapter on leukorrhea is interesting and informative. Although the diagnosis and treatment of Trichomonas vaginalis vaginitis is covered rather completely, especially in the relative length of this section, there is no mention of the efficacy of oral therapy, that is, Tritheon tablets for this condition.

The final chapter, appropriately, is called "Menopause and the Climacteric." The rationale of endocrine therapy is discussed. Particular attention is directed to the use of estrogen-androgen combinations for the relief of vasomotor symptoms. Suggested dosages for several preparations are given.

The material is well arranged, and the print is large and well spaced; consequently, information is available with a minimum expenditure of time and effort. It is the reviewer's opinion that the book was written primarily for the general practitioner to use as a reasonably current treatment guide although there is no preface or introduction to convey this thought.

—M. Graham Bolton, M.D., Hempstead.

Practical Pediatric Dermatology

MORRIS LEIDER, M.D., Associate Professor of Dermatology and Syphilology, New York University Post-Graduate Medical School. 433 pages. $10.50. St. Louis, C. V. Mosby Company, 1956.

This book, written by a dermatologist about infants and children, covers the field more thoroughly and explicitly than any similar text I have examined. It is certainly not a rehash of old texts; there is hardly a wasted word.

In the preface the author emphasizes that cutaneous conditions play a large part in the office and hospital practice of pediatrics. Throughout the treatise he makes the point that foods play little part in the dermatological problems of infants and children. This is a good point and has long been known by dermatologists; however, it seems to be a fetish of the pediatricians and general practitioners to juggle dietary ingredients furiously in all skin derangements.

The organization of this book is excellent. First, it presents the usual basic science of infant skin and the principles of diagnosis and treatment. Then, it goes into the various diseases as to their known causes, including the cutaneous manifestations of internal diseases. A chapter is given to congenital and hereditary diseases, and another to important dermatoses not etiologically classifiable. Also shown are many interesting charts and tables of miscellaneous conditions and their salient facts. Finally, there is a glossary of common techniques and lay words and phrases peculiar to pediatric dermatology.

In the "basic science" chapter is a glossary of terms and phrases used in dermatohistiopathology. This would be of

much help to the nondermatologist in interpreting pathological diagnoses; these tables simplify the organization of the lesions to a pattern of disease. Of interest is one table showing the types of disease peculiar to different portions of the body. This chapter also includes a list of common laboratory procedures of dermatological importance.

The chapter on dermatological therapy is excellent and up-to-date; the latest as well as the time-proven prescriptions and drugs are given for different stages in the morphological picture of cutaneous derangements. These are referred to throughout the book by number. For the nondermatologist this should prove an invaluable source of medications for any type of disease seen. Explanatory pictures in black and white show typical cases of common diseases.

The most interesting chapter is the one on allergic mechanisms. In a few pages Dr. Leider explains the allergy of disease better than I have seen in many entire books on dermatologic allergy. Given these allergic mechanisms, the explanation of many diseases follows in a reasonable manner. Only a few lines are devoted to syphilis, though most dermatology texts contain chapters on the subject.

This book should be an easily understood and authoritative reference for any practitioner treating infants and children.

—Bedford F. Pace, M.D., Beaumont.

Electrocardiography; Fundamental And Clinical Application

LOUIS WOLFF, M.D., Visiting Physician, Consultant in Cardiology and Chief of the Electrocardiographic Laboratory, Beth Israel Hospital; Assistant Clinical Professor of Medicine, Harvard Medical School. ed. 2. 342 pages. Philadelphia, W. B. Saunders Company, 1956.

This publication was not intended to be a comprehensive study on the subject of electrocardiography. The author had in mind a brief, concise, to the point discussion giving the reader the fundamentals and the most practical clinical aspects of electrocardiography. The medical student, the intern, and the general practitioner will find this book well suited to their needs.

The subject of vectorial interpretation has been touched upon briefly but has been discussed enough to prepare the way in vectorcardiography for those who desire to work in this field. The important field of congenital heart disease is not discussed. The addition of the section on the arrhythmias was a necessary improvement and adds much to the usefulness of the book. The subject of coronary heart disease has been well presented with a large number of tracings described and interpreted.

The volume should serve as a useful source of information to the practicing physician who wishes to learn electrocardiography but does not aspire to become a specialist in the field.

—Thomas R. Jones, M.D., Jasper.

Fluid Balance Handbook for Practitioners

WILLIAM D. SNIVELY, JR., M.D., and MICHAEL J. SWEENEY, M.D., Attending Physicians, Evansville Child Health Clinics; Staff Member, St. Mary's Hospital; Medical Department, Mead Johnson & Company. 326 pages. $6.75. Springfield, Ill., Charles C Thomas, Publisher, 1956.

So little is understood about fluid balance and electrolytic action by the practicing physician that the authors have written a handbook for a better understanding which is concise but very thorough.

The text is divided into component parts beginning with the body fluids and their origin. These components are linked with the next part, clinical diagnosis, which deals with specific fluid imbalances of various types, changes in extracellular fluid properties and position, and the nutritional status of the body. The changes in properties, position, and nutritional status of extracellular fluid under therapy are further divided into balanced solutions, replacement solutions, fluid shift occurrence, and nutritional deficit. The illustrations and plates are excellent.

The book presents neither new concepts nor original investigations. An attempt is made to avail practicing physicians of the new advances and contributions made by outstanding clinicians and investigators in the field of fluid therapy.

The authors and publisher have done a magnificent piece of work. The text contains a wealth of material which cannot be recommended too highly. All physicians, general or highly specialized in their fields, should find this a valuable storehouse of information.

—A. W. Brazda, M.D., Ranger.

Coronary Heart Disease—Angina Pectoris; Myocardial Infarction

MILTON PLOTZ, M.D., F.A.C.P., Clinical Associate Professor of Medicine, State University of New York, Medical Center at New York. 353 pages. $12. New York, Hoeber-Harper, 1957.

Coronary arterial disease is one of the most important and human of all illnesses. It never occurs in other vertebrates except under unusual circumstances and is unknown even among the primitive races of man. Dr. Plotz gives the first full scale consideration of coronary disease in English in many years. It is addressed to both general practitioners and specialists. This is a meticulous treatise with multitudinous reference on every phase of the disease as expounded in recent years. Controversial subjects are treated in a scientific, philosophical manner with a maximum of proved facts and a minimum of conjecture.

From the first chapter, which introduces the subject and discusses current concepts of coronary circulation, the whole book is informative. The first four chapters deal with etiology from various aspects and statistics; the fifth relates to tobacco; the sixth chapter concerns pathology and pathogenesis; the seventh, eighth, and ninth chapters give a comprehensive discussion of clinical aspects, including complications.

The section on electrocardiography is complete but does not replace basic fundamentals as found in textbooks.

The next nine chapters deal with newer diagnostic techniques and methods of therapy from ballistocardiography to surgery, anticoagulants, and diet.

A valuable part of this book is the last chapter devoted to the medicolegal aspects of coronary disease which is discussed fully with many case histories.

The subject is completely presented in a manner acceptable to beginner, general practitioner, and specialist alike.

—M. K. Patteson, M.D., Lampasas.

Clinical Recognition and Management of Disturbances of Body Fluids

JOHN H. BLAND, M.D., Associate Professor of Medicine, University of Vermont College of Medicine. ed. 2. 522 pages. Philadelphia, W. B. Saunders Company, 1956.

This work performs two real services: (1) an understandable conceptual framework is presented which can help the practitioner evaluate electrolyte abnormalities and (2) correlations between signs and symptoms and various electrolyte disturbances are elucidated. Most chapters consist of a self-contained discussion of one clinical condition. This enhances the book's value as a reference work but engulfs the cover-to-cover reader in tedious repetition.

The clinical discussions are notably effective and concise and should help dissipate the enervating state of awe in which electrolyte problems are sometimes approached. Good discussions of the buffering action of hemoglobin and the "chloride shift" and the hypochloremic alkalosis of potassium deficiency are given. The therapeutic recommendations are en-

lightened and conservative with useful hints about avoiding over-treatment. The preeminence that clinical evaluation can and must hold over mere laboratory reports is emphasized, and trade names are given when indicated.

It is doubtful that one can understand hydrogen ion control without considering the law of mass action and the concept of chemical equilibrium which it expresses. Dr. Bland's failure to do so has led him to such indefensible generalizations as that the kidney controls the serum bicarbonate by controlling the amount of bicarbonate excreted (page 75). In fact, bicarbonate is one of the few constituents of blood which the kidney cannot possibly directly alter. Such defects so regularly bemuddle the theoretical discussions of hydrogen ion control as to render them more confusing than illuminating. The Henderson-Hasselbalch equation which is used in this work is merely the appropriate mass action equation expressed in logarithms and is no simplification. Accepted ionic concepts and notations are not always used, acidosis is never defined, and the vast differences between the precisely understood chemical compensatory systems and the poorly understood endothermic biological compensatory mechanisms are never clearly delineated. After rightly condemning any implication that cations are basic, the author proceeds to endow anions with acidic properties—a laxity of no less magnitude. Several errors should have been corrected in proof; for example, on page xiv PO=4 is defined as "the anion sulfate" and ammonia is repeatedly printed as (NH_3+).

This book can be recommended unreservedly as a reference work for all practitioners who may treat the seriously ill, but it cannot be so recommended to students of "acid-base balance."

—Eck G. Prud'homme, M.D., Fort Worth.

Ionizing Radiations and Cell Metabolism

Ciba Foundation Symposium, edited by G. E. W. WOLSTENHOLME and C. M. O'CONNOR. 318 pages. $8. Boston, Little Brown and Company, 1956.

This book is the account of 18 concise reports of progress and new discoveries in the field of radiation and cell metabolism by the most outstanding workers in the subject.

The most exciting of these reports and also the one with the most relevance to clinicians was the chapter by Barnes and Loutit (Harwell). Briefly, these workers showed that following a dose of radiation which destroyed most of the bone marrow of the mouse, intravenous injections of heterologous bone marrow (rat) resulted in colonization of the mouse marrow by the rat cells. The colonization so far has proved to be permanent, and the lethality of the dose was markedly reduced by this treatment. This work has been proved by actual chromosome counts, and the results have been confirmed by other laboratories (Oak Ridge). The obvious suggestion was offered that atempts should be made to treat experimental leukemia with this method. The results of this work no doubt will prove to be far-reaching.

Other excellent sections were written by Dale, Krebs, Laser, and Hollaender. This book can be highly recommended to all of those people who are engaged in radiation research, not only for its clear exposition of some difficult subjects, but for the lively discussions. Clinicians will find several readable and informative chapters.

—Clyde M. Williams, M.D., Austin.

Pediatric Cardiology

ALEXANDER S. NADAS, M.D., F.A.A.P., Assistant Clinical Professor of Pediatrics, Harvard Medical School; Physician, Sharon Cardiovascular Unit, Children's Medical Center, Boston. 587 pages. $12. Philadelphia, W. B. Saunders Company, 1957.

Dr. Nadas states this volume is intended to be "a handbook for the pediatrician, the general physician, and the medical student." It would be fair to say that his work is as helpful in pediatric heart disease as Wintrobe's "Hematology" in blood disease. Clinical material from the Children's Medical Center of Boston forms the basis for his observation. The literature has been thoroughly culled, and many isolated facts are compared with his own experiences and then incorporated or discarded.

The book is divided into four parts: "The Tools of Diagnosis" in which history, physical examination, radiology, electrocardiography, phonocardiography, catheterization, and angiocardiography are discussed; "Acquired Heart Disease," including rheumatic fever, endocarditis, arrhythmias, myocardial disease, pericardial disease, and congestive failure; "Congenital Heart Disease," with physiological and clinical presentation; "Anesthesia," a final chapter prepared by Robert M. Smith, chief of anesthesia, Children's Medical Center, Boston.

For the practicing physician the chapters on electrocardiography, arrhythmias, and myocardial disease, and the excellent discussion of the differential points of the more common congenital lesions are most enlightening. Dr. Nadas writes clearly and with humor. His discussions of physiology are good, but his descriptions of clinical entities and differential diagnosis make the book outstanding.

—Myron M. Nichols, M.D., Midland.

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★ American Medical Association

AMA Public Relations Institute

Two Texans participated in the Public Relations Institute sponsored by the American Medical Association August 28-29 in Chicago. Dr. Thomas L. Royce, Houston, took part in a discussion on "Problems of Science Writers and the Working Press in Covering Medical Stories." Charles L. Collum, Jr., Austin, Executive Secretary of the Travis County Medical Society, entered the discussion on "County Societies with Executive Secretaries."

C. Lincoln Williston, Executive Secretary of the Texas Medical Association, Austin, and Bill Robertson, Coordinator of Public Relations and Advertising, also attended the meeting.

The Institute is presented as a service to state and county medical societies. It is designed for representatives of these societies and their auxiliaries, for medical school public relations personnel, and for others working in the field of medical public relations. Some of the topics covered in the meeting were "Problems Involving Release of Stories by Medical Schools and Pharmaceutical Industries," "Large State Societies," "Small State Societies," "Counties Without Executive Secretaries," "Grievance Committee Reevaluation," and "Public Relations Problems in the Socioeconomic Legislative Fields."

Nutrition in Pregnancy

The American Medical Association's Council on Foods and Nutrition will sponsor a symposium October 11 on nutrition in pregnancy. It will be held at the University of Missouri Medical Center, Columbia, and will be moderated by Dr. Robert L. Jackson, professor and chairman of the Department of Pediatrics there. Subjects will include "Influence of Maternal Nutritional Level on the Fetus and Infant," "Metabolic and Biochemical Changes in Normal Pregnancy," "Importance of Nutritional State of Mother Prior to Conception," "Production of Congenital Malformations by Maternal Dietary Deficiencies, Experiments, and Interpretations," "Effect of the Reproductive Cycle on Nutritional Status and Requirements," and "Dietary Habits During Pregnancy."

Details of the meeting may be obtained from Philip L. White, Sc.D., Secretary, Council on Foods and Nutrition, 535 North Dearborn, Chicago 10.

Broadcasters, Doctors, Sponsor Conference

The medical profession and the broadcasting industry have announced plans for a fall conference on utilization of local radio and television time by medical and voluntary health organizations. The two-day meeting, to be sponsored jointly by the American Medical Association and the National Association of Radio and Television Broadcasters, is set for November 7-8 in Chicago.

Public interest programs involving medical subjects are appearing more and more frequently on radio and television, and broadcasters and physicians alike are anxious for these programs to be interesting and factually correct, those planning the conference emphasize. Information concerning the meeting can be obtained from the American Medical Association, 535 North Dearborn, Chicago 10.

AMA Plans Rural Health Meeting

How to develop more effective rural health programs will be the chief topic of concern at the American Medical Association's second study conference October 4 and 5 for chairmen and members of state rural health committees. Sponsored by the Council on Rural Health, of which Dr. Allen T. Stewart, Lubbock, is a member, the conference will be held at Purdue University, Lafayette, Ind.

The opening session will be devoted to a discussion of organizational techniques of statewide rural health committees. Another session will feature representatives of leading farm organizations outlining their health programs. Following this latter presentation will be a discussion of ways that the medical profession and agricultural groups can best work together in developing better health programs.

Reservations for this meeting may be sent directly to the Students Union, Purdue University, Lafayette, Ind.

★ Texas Medical Association

PUBLIC RELATIONS, INDOCTRINATION, AND OFFICIAL BUSINESS

A busy place was the Texas Medical Association's headquarters building in Austin the week end of September 6-8, when the third annual Public Relations Conference, the second Indoctrination Program, and the fall meeting of the Executive Council were held. A record number of 375 registered for week-end activities, including sessions of 30 boards, councils, and committees of the Association.

Meeting jointly, those attending the Public Relations Conference and the Indoctrination Program heard talks by

Doctors leave meetings upstairs to find a barbecue dinner awaiting them.

three guest speakers, Leo E. Brown of Chicago, Dan J. Forrestal of St. Louis, and Melvin T. Munn of Dallas; saw presentations made to the General Practitioner of the Year from Texas, Dr. Thomas Ford Bryan of Dublin, by both the Texas Medical Association and the Southern Medical Association; honored Dr. F. J. L. Blasingame of Wharton, new general manager-to-be of the American Medical Association; and were guests of the Texas Medical Association for luncheon at the headquarters building and of the Charles O. Finley Company for a hospitality hour at the Driskill Hotel.

The Public Relations Conference, presided over by Dr. Joe R. Donaldson of Pampa, included two panel discussions, on "Basic PR Projects Which Every County Medical Society Should Have" and "What's New in County Society PR?" The Indoctrination Program, with Dr. David W. Carter, Jr. of Dallas presiding, consisted of a series of talks on matters of interest to the 120 new and transfer members attending and a film on the AMA. The Executive Council was in session Sunday morning to hear reports from the 30 boards, councils, and committees which met Friday evening, during the day Saturday, or early Sunday morning; Dr. Denton Kerr of Houston presided.

More detailed information about each segment of the program follows.

Guest Presentations

Three guest speakers addressed the Public Relations Conference and the Indoctrination Program September 7. They are Leo E. Brown, Chicago, executive assistant to the general manager in charge of public relations, American Medical Association; Dan J. Forrestal, St. Louis, president, Public Relations Society of America; and Melvin T. Munn, Dallas, director of public relations, Blue Cross-Blue Shield of Texas.

THE BELL TOLLS

Bells have been intimately associated with many historical events over the years, and today the bells of medical public relations are tingling in many areas, stated Leo E. Brown of Chicago. All too often the "bell tolls" have been used to announce a new service or benefit to the American public. In looking back over the past 6 years, Mr. Brown pointed out that in 1951 it used to be a full time job just answering the complaint letters directed to the AMA. But most frustrating of all was the fact that in many instances they could not be answered with any degree of satisfaction; for example, a complaint of inability to get a doctor in an emergency or at night. Today there are more than 800 emergency telephone answering services of county medical societies throughout the country, and such complaints are rare. Similarly, complaints about fees and quality of care now may be answered by referring the complainant to the local grievance committee. Mr. Brown continued:

> The blame for the shortage of doctors in rural areas can be met by reviewing the activities of our rural health committees in which Texas has been a leader.
>
> The charge that doctors are shirking their community and citizenship responsibilities can now be easily met by enumerating hundreds of public service projects sponsored by county medical societies across the nation.
>
> The accusation that doctors hide behind their alleged free services to the indigent in refusing to contribute to worth-while causes can be met head on. We need only to cite their contributions to hospital building programs, community chests and the 88,000 physicians who contributed over three million dollars to medical education last year.
>
> This is "one side of the coin" in which many alarming situations have been transformed into chimes.

The other side of the coin is the membership public. The medical profession is continuously informed how the AMA and state and county medical societies serve their members, and today the requests and suggestions from members can be answered promptly. Pamphlets, exhibits, films, radio transcriptions, television programs, or literature on a variety of subjects are provided.

Doctors have a public relations job to do, and they are making progress in various areas. They are helping to organize medical assistants societies, are developing liaison with the schools through high school sports injury clinics, are assuming their rightful responsibility in continuing the poliomyelitis inoculation for the public and also the influenza immunization, are planning further liaison with the National Association of Radio and Television Broadcasters

Speakers for the Public Relations Conference were Dan J. Forrestal, St. Louis; Melvin T. Munn, Dallas; and Leo E. Brown, Chicago, from left to right.

by means of a national conference on television as used locally, are developing a cooperative program with various groups concerning commercials on television for proprietary medicines, and are interested in defeating legislation which would include physicians under social security and would expand hospital benefits under social security. Most of the areas are positive and will result in good public relations.

However, all these efforts are like a "sounding brass or tinkling cymbal" if the individual physician fails to practice good public relations in the handling of each patient.

WHAT IMPRESSION DO WE MAKE?

PR = x + y, where *PR* means public relations or the impression made by a person or group, *x* means the inherent value or conduct of the person or group, and *y* means the interpretation of that conduct or inherent value. This formula is always true, Dan J. Forrestal of St. Louis, manager of public relations for the Monsanto Chemical Company, declared. The impression which an association or its individual members make on the public will be favorable only insofar as the association and its members are basically worth while and the message about this worthiness is told appropriately.

Public relations is not for specialists alone to determine; many good public relations values can be obtained either at no cost or low cost, for they are the total of a series of impressions that may be obtained through such everyday means as thoughtful telephone practices, pleasing appearance of oneself and one's surroundings, responsible civic action, and cooperative press relations. In this latter area, Mr. Forrestal emphasized the "thunderous impact of silence" which sometimes is overlooked.

"Through our eyes and ears, we can learn so much, but through our mouths we can learn so little," he reminded, recommending right action and careful communication in efforts to put across desired messages and impressions.

Mr. Forrestal cited the profession of public relations as the fastest growing profession in America. The Public Relations Society of America, only 10 years old, has 2,500 members, whereas the American Medical Association, 110 years old, has 160,000. Public relations practitioners, now experiencing some of the same problems which beset doctors when their organizations were young, have much to learn from the medical profession in the field of ethics and professional standards, he said.

SOMETHING FOR THE FOLKS

Communication with any audience—individual or group—is most effective when one has something for that audience, for motivation comes primarily through self interest, reminded Melvin T. Munn of Dallas.

Everything the doctor says, writes, or does; the talent, integrity, and understanding that he brings to every patient-case; his participation in the affairs of community, state, and nation; his financial as well as professional relationships with patients, hospitals, and community; and his relations with professional bodies—all these create the composite picture of his person and character.

Certain objectives appropriate for each doctor include these: (1) to conduct an honest and professional relationship with his patients and community; (2) to exceed every minimum requirement of the law and professional code decreed for his guidance; (3) to contribute a portion of his means to the worthy community projects of service; (4) to be a good friend to his fellow man; (5) to be a good citizen; and (6) to keep the community informed on the aims and objectives of medicine and its place in the lives of his fellow citizens.

Although distribution of time by the physician is a problem, almost every other business or professional person has much the same difficulty. Bound only by the responsibility the doctor holds to the sick and the injured, he must assume equal obligation to the general affairs of his community if he is to gain the respect, trust, and support of the many other divisions of society in which he moves.

Several exhibits added interest to the meetings. Reed Giese, Austin, and Charles O. Finley, Chicago, administrator of the disability insurance program sponsored by the Texas Medical Association, discuss their exhibit with Dr. Robert D. Moreton, Fort Worth.

It is the nature of man that he should be suspicious and questioning of those things that he does not understand. Everything the doctor can do to lift the mantle of mysticism from the practice of his art and to explain the reasons for actions often criticized by the public will be a step in the proper direction.

Although the doctor needs to be aware of the factors which make for good will and to improve his techniques in that line, the truth is that most of us "don't public relate as well as we know how."

Public Relations Conference

Dr. Joe R. Donaldson, Pampa, chairman of the Committee on Public Relations, presided over the third annual Public Relations Conference Saturday, September 7. He introduced Dr. Glenn D. Carlson, Dallas, who served as moderator of the morning discussion on "Basic PR Projects Which Every County Medical Society Should Have" and Dr. Van D. Goodall, Clifton, and Dr. Thomas L. Royce, Houston, who coordinated the afternoon panel on "What's New in County Society PR?"

BASIC PR PROJECTS

Public Grievance Committees.—Dr. R. Mayo Tenery, Waxahachie, pointed out that the Association's Constitution and By-Laws requires each county medical society to have

a public grievance committee. The committee itself has no disciplinary powers; in any case the committee feels, after thorough investigation, is a breech of medical ethics, the offending physician should be prosecuted before the board of censors. The committee also investigates complaints against physicians when there has not been a violation of medical ethics. Such cases usually arise out of misunderstanding, and both sides must be heard fully. The majority of complaints will concern fees, with the second most frequent complaint being improper medical treatment. Another is the failure of a physician to come when called at night.

The grievance committee should answer a complaint promptly by letter stating that the case is to be investigated. Hearings should be held as soon as possible after the complaint has been filed. In cases not involving a violation of medical ethics, both the complainant and the physician should be informed by letter of the decision reached; verbal explanations should be made. An appeal may be made by either party to the Councilor of the district or the Board of Councilors. Frequently satisfactory disposition of a case is possible by personal discussion with the parties involved, thereby avoiding the need for formal investigation.

Dr. Blasingame accepts from Dr. Rouse a letter case filled with letters expressing good wishes from friends throughout the state.

Emergency Medical Care.—Emergency medical care is a problem for the local county medical societies, which must supply a doctor in an emergency, Dr. Charles R. Younkin, Houston, stated. To be effective the society must have first an active panel to cover the calls, second a central receiving area for the calls, and third a means of dispensing information about it to the public. Dr. Younkin pointed out that about 40 calls a month have been average in Harris County since the inception of the emergency call system. There are about 150 doctors on the list in all fields of medical practice. Only those asking to be on the list are called in Harris County (new members are informed of the system and invited to be placed on the list, but not obligated), although other societies have different systems, some on a semivoluntary basis. He personally favors a compulsory system, putting all men in practice less than 2 years on the panel. Often a county medical society serves as its own clearinghouse for emergency calls. In Harris County a doctor is contacted if he refuses three calls, and his name dropped from the list if necessary. Newcomers to the county, Dr. Younkin said, are advised of the service by the Welcome Wagon and also are advised to get a family doctor.

Medical Economics and Medical Service: Promotion of Voluntary Health Insurance and Achieving Greater Understanding of the Cost of Medical Care.—With graphs and charts, Dr. Everett C. Fox, Dallas, discussed the cost of medical care, particularly the changes from 1929 to 1955 with reference to the important contributions that have been made by voluntary health insurance. Under the consumer's price index the cost of living in general has increased from 100 to 192 during this period, medical care from 100 to 174 or an increase of 74 per cent, physicians' fees to 160 or 60 per cent, dentists to 182 or 82 per cent, and hospitals to 322. In 1930, 3.99 per cent of consumers' disposable income was spent for medical care, and in 1953 this figure had risen to 4.35 per cent, an increase of only .36 per cent in almost 25 years. In 1955, the total cost of medical care was approximately 12 billion dollars, 20 per cent of which was paid by prepaid medical insurance.

In addition to showing the inflationary trend of income and cost of living, Dr. Fox pointed out that 112 million persons have some sort of hospitalization insurance, 96 million have coverage for surgical services, and 63 million are covered for some medical care. Dr. Fox stressed the importance of physicians' having an idea of how to answer criticisms of medical costs and recommended for this purpose an address by Dr. Leonard Larson, a member of the AMA Board of Trustees, to the American Management Association, which is to be published soon in *Today's Health.*

Telling Our Story to the Public: Press, Radio, and Television.—Whether he knows it or not, every member of a county medical society is a member of its public relations committee, remarked Dr. A. Fletcher Clark, Jr., San Antonio. But committees are organized to publicize the profession's story in the press, radio, and television. The committee should be responsible for seeing what stories should be available to the public and getting them to the public. A press code is necessary for making the media aware that these articles should be before the public. A society needs a spokesman to make a news release, preferably the president or vice-president. Although doctors often hesitate to let their names be used in the press, official announcements should have official quotes, Dr. Clark indicated. He suggested that any society meeting should be publicized and new officers announced. Whether or not a society wants its own radio or television program is a local problem. Bexar County uses its sustaining television series to publicize such society programs as the emergency call system. Press rooms at medical meetings should be used more, Dr. Clark said; in addition to the usual publicity, points the society wants stressed can be mentioned by guest speakers in interviews. Special medical sections in newspapers are useful for special events, he concluded.

WHAT'S NEW IN COUNTY SOCIETY PR?

Grievance Committee Procedures.—Although the county grievance committee generally deals with formal written complaints, it can be of service to the profession by settling minor complaints offered by telephone or through letters to newspapers, Dr. M. C. Carlisle, Waco, chairman of the McLennan County Medical Society grievance committee, said.

In McLennan County, immediately after receiving a signed complaint, the grievance committee notifies the complainant

by letter that the committee will hear the case as soon as feasible and asks for a signed and witnessed authorization to examine records of any physicians or hospitals having pertinent information. The complainant is interviewed and may present witnesses before the defendant physician is called to hear the charge and present his records and witnesses. The committee then goes into executive session for discussion and voting. The complainant is notified in writing of the opinion and recommendations of the committee; the defendant also is told of the decision. If desirable, the complainant is invited to discuss the decision with some member of the committee. Except for a report to the chairman of the board of censors and the president of the county medical society, no publicity is given to the findings.

A committee of from five to seven members serving overlapping terms and representing general practitioners, surgeons, and psychiatrists among other specialties is recommended. Individual members should be well established, of integrity, courageous, and of a judicial temperament.

A grievance committee also should take action in case of complaint by a fellow physician, adverse newspaper publicity, grand jury indictment, or punitive action by the State Board of Medical Examiners.

One of the panel discussions on the Public Relations Conference.

Navarro Plan for Medical Representation in Community Affairs.—All attitudes, relationships, and services rendered by members of a county medical society, either as individuals or as a whole, should be recognized as emanating from the society as an organization, Dr. Paul H. Mitchell, Corsicana, recommended. Service can be provided through such activities as a workable emergency call system, improved service to charity patients at hospitals, adoption of uniform regulations in relation to control of epidemic and contagious diseases in the schools, and establishment of an endowment fund supported by the medical society for treatment of patients. In addition, efforts can be made to encourage participation in civic organizations—especially those which relate in any way to medical care—by physicians, not only as individuals but as members of the medical society, reflecting the considered opinion and policies of that society. These policies, of course, must be constantly reviewed and revised, with the revisions disseminated to all the membership.

Such a program of activity has been initiated by the Navarro County Medical Society with the aim of getting organizations to develop the habit of asking for the medical profession's advice on medical matters rather than coming to the doctors with a well publicized scheme in which pressure has built up for cooperation.

Science Fairs in Texas.—Five Texas high school students returned from the National Science Fair in Los Angeles this year with awards; four were from schools where fairs were sponsored by medical auxiliaries. The Woman's Auxiliary to the Texas Medical Association has been interested in such fairs since 1956, when Travis County worked on the project, Mrs. W. D. Nicholson, Freeport, chairman of the Science Fair Committee for the State Auxiliary, pointed out.

Biological, physical, and physiographical exhibits prepared by elementary, junior, and high school students are planned to encourage interest in science and mathematics as well as to show the public the accomplishments of students in these areas. Local, regional, and national fairs are held. Each county auxiliary is being invited to push this new project to help develop future leaders in the medical and other sciences.

The Auxiliary and Public Relations.—The doctor's wife is expected to be interested in the welfare of her community and to do what she can to help. Efforts in this line are being encouraged by the Woman's Auxiliary to develop good public relations, emphasized Mrs. George Herrmann, Galveston, state public relations chairman.

One project for this year is the distribution of a wallet-sized health record card on which a person may carry identification information and facts such as blood group and Rh factor, vaccinations obtained, sensitivity to drugs—all valuable in case of accident or sudden illness. A booklet with space for similar information but with room for records of illnesses and operations and designed for a whole family also is available. The cards and booklets may be obtained in quantity for distribution to patients by interested doctors from the central office of the Association without cost.

Another booklet doctors may request at little cost is a cartoon explanation of "What You Should Know About a Doctor," which is designed to create understanding and rapport between doctor and patient.

Liaison and Cooperation Between Doctors and Lawyers.—Better interprofessional relations at the grass-root level between attorneys and physicians would do much to alleviate the present areas of friction, Dr. Hal V. Norgaard of Denton told listeners. Dr. Norgaard used his own community as an illustration of splendid relationship between these professions. The medical society for several years has sponsored joint meetings with the local bar association. In addition, he mentioned other factors that have led to understanding and mutual appreciation: Approximately the same number of lawyers as doctors, the majority being less than 50 years of age, practice in Denton; most of them saw military service. Members of both organizations know each other well, professionally and socially. Doctors serve as family physicians for the lawyers, and lawyers handle legal matters for their physicians. Doctors and lawyers belong to the same service and social clubs and serve together on civic, hospital, church, and other committees.

In Denton, lawyers and doctors sometimes avoid building up suits and major differences by talking informally with each other about situations when they are first brought up and thus coming to an understanding.

Health Education Programs.—A health education course in the Jacksonville Public Schools, initiated in 1953, has increased the understanding and cooperation of patients exposed to it and has created better relations for the medical society, Dr. J. Collier Rucker stated. The course, primarily for high school grades, has consisted largely of educational films followed by discussion with the school nurse or one of the local doctors. A working understanding of anatomy and organic functions of the body, together with instruction regarding contagious diseases, immunization, emotional problems of adolescence, alcoholism, nutrition, good grooming, and posture exercises, has been included. Films on most of these subjetcs are obtainable without charge through the

Memorial Library of the Texas Medical Association, the Texas State Department of Health, or the University of Texas.

Problems encountered have resulted primarily from a crowded school schedule and lag in interest without regular stimulation by one of the local doctors. Without constant supervision and participation by doctors and dentists the course proved ineffectual.

Poison Control Center.—Prevention of poisoning by educational publicity and best possible treatment of persons poisoned not only has reduced serious illness but has created good public relations for the medical profession in Austin, where a Poison Control Center has been active since January, Dr. A. L. Exline, Jr. reported. A group of physicians, biochemists, pharmacists, research chemists, nurses, receptionists, and laymen has helped to establish the center in the local city-county hospital.

Newspaper, radio, and television publicity, declaration by the mayor of "Poison Control Week," and speakers before civic groups emphasized to mothers of preschool children the importance of preventing poisoning. At the hospital center, a reference library and file on more than 20,000 toxic products, antidotes, a laboratory set-up for toxicological analysis, and a 24 hour staff are ready for emergencies. Parents who phone are asked to call their family doctor; charity cases are handled in the emergency room at the hospital. More than 500 calls from physicians have been answered already, Dr. Exline said.

The poison control group also helped sponsor legislation to label toxic products as to content and antidotes.

Indoctrination Program

The second Indoctrination Program staged by the Texas Medical Association for provisional members, held September 7 at the headquarters building in Austin, attracted a registration of 153, of whom 120 (72 new, 48 transfer members) were eligible to receive credit for attendance. Dr. David W. Carter, Jr., Dallas, Vice-President of the Association, presided over the program. In addition to the presentations summarized hereafter, registrants heard the three guest speakers referred to on another page and saw a motion picture about the American Medical Association entitled "The Case of the Doubting Doctor."

The Texas Medical Association: An Accounting of Stewardship—What Happens to Your $50 Dues?—More than $225,000 in revenue from membership dues will come to the Texas Medical Association during the coming year, Dr. Byron York, Houston, a member of the Board of Trustees, reported. This is the largest source of funds for carrying on the work of the organization; the next largest are from advertising in the *Texas State Journal of Medicine* and from sale of booths at the annual session.

Of the $50 in dues paid by each regular member of the Association, $30 is allocated to the General Operating Fund; $15 to the Building Fund; $3 to the *Journal;* $1 to Medical Defense; and $1 to the Woman's Auxiliary. Major expenditures for general operation go to carry on the work of committees, to salaries of the central office staff, and to maintain the headquarters building. One of the largest outlays is for the Memorial Library, the services of which are available to doctors throughout the state. Another is for the annual session, the next of which will be in Houston, April 19-22, open to members without payment of a registration fee. Less than 2 per cent of the total operating budget will be spent this year for public education on legislative issues; nevertheless, the Association has an aggressive, alert program which, for example, paid dividends in the State Legislature the past spring.

The finances of the Association are in good order, Dr. York emphasized. Members having questions about expenditures or policies are invited to query the Trustees.

American Medicine: Its Objectives, Its Programs, Its Problems.—Explaining the qualifications for membership in the Texas Medical Association and its relationship to the county and national organizations, C. Lincoln Williston of Austin, Executive Secretary of the Association, pointed out that although membership is not compulsory, approximately 97 per cent of the physicians in Texas belong to their county and state societies and 94 per cent are members of the American Medical Association.

Doctors are aware of some adverse opinions about the medical profession held by the public and are attempting to create understanding about major points of dissatisfaction. For example: (1) *High cost of medical care.* Although medical care costs, like other living costs, have risen, they have not increased as rapidly as other commodities and services and the patient receives much more for his medical dollar today than ever before. Elimination or control of disease has been a major factor in adding a total of 23 years to our life expectancy since 1900. Voluntary health insurance, comparatively unknown only a few years ago, now protects 116,000,000 Americans against hospital expense, 96,000,000 against surgical expense, and 7,000,000 against major medical expense. (2) *Overcharging or unsatisfactory care.* Mediation committees are available in most medical societies to prevent and resolve misunderstandings, to clarify and adjust differences between the physician and the patient, and to assist in maintaining high standards of professional deportment. (3) *Doctor shortage.* A survey conducted by the Texas Medical Association indicates that there is no real shortage of physicians in the state, but there is maldistribution; a placement service operated by the Association helps alleviate this problem. Too, the Texas Medical Association has endorsed the erection of a fourth medical school in the state to keep the education of physicians in line with population growth.

One problem confronted by the medical profession today is the changing social concept that threatens to sweep away the present American tradition of free enterprise and with it the private practice of medicine. Already, the federal government pays for almost one-fourth of the cost of medical care. Heading the list of eligibles are 22,000,000 military veterans. With the current Selective Service procedure, the number of veterans is increasing rapidly, and if the present practice of caring for veterans with nonservice incurred disability as well as for those with service connected conditions persists, government sponsored medical care at taxpayers' expense will be an ever larger segment of the total picture. The need for individual doctors to join in action against this general tendency is great, Mr. Williston said.

Serving the Doctors of Texas.—Inviting indoctrinees to explore the headquarters building, Donald M. Anderson, Assistant Executive Secretary of the Texas Medical Association, noted that they would see in action not only the 23 staff members but some of the more than 250 physicians who, as officers and members of Association committees, work to serve the doctors of Texas. From the officers and committees come the policies that shape the Association's services.

Among these is the Memorial Library, which is circulating on a free loan basis more than 2,000 items monthly to physicians throughout the state. The *Texas State Journal of Medicine,* circulated monthly to the membership, has received commendation for its excellence. The Woman's Auxiliary renders service through its constructive programs in many fields and lends dependable support in public relations and legislative efforts. The Physicians Placement Service helps doctors to find locations and communities to find doctors, whereas a recent doctor distribution survey is

an example of the surveys and studies which are regular activities. The Association is active in staging the annual session, directing legislative communications to members, administering membership records and funds, and providing administrative and secretarial services to officers and committees. Public relations is a major activity, both internal and external.

A chief effort is to maintain liaison with county medical societies and individual doctors, partly through the *Journal* and general mailings (37 last year), but mainly through a visitation program. A variety of programs can be brought to the county societies through the visitation program, but the visiting speakers also can learn what the individual doctor is thinking on subjects of importance to the medical profession, Mr. Anderson emphasized. These ideas are brought back to the officers and committees and are used in making the Association responsive, as well as responsible, to the will of the members.

A Message from the President.—Although he addressed the Public Relations Conference as well as those present for the Indoctrination Program, Dr. Denton Kerr of Houston, President of the Association, directed his remarks primarily to the indoctrinees.

Dr. Kerr pointed out that the medical profession is beyond parallel not just in this country but in the world. He urged all doctors to assume their civic responsibilities and suggested that it is worth what it costs in time away from home and from practice for the favorable impression that will be made. New physicians should make it a point to get acquainted with the Council or in their district and should feel free to call on him at any time for advice or assistance. Take your work seriously, Dr. Kerr said, and always realize that each patient in a doctor's office is his best advertisement; although public relations men do an outstanding job in coordinating programs for the medical profession, personal contact between the patient and the doctor is the most important aspect of good public relations. The patient has confidence in his physician, and the doctor should never betray this confidence. Dr. Kerr also suggested that new doctors have frequent consultations about fees and any problems with those in the community they trust. He closed with a final word of welcome to new members, indicating that the Texas Medical Association stands ready to help and urging physicians to call on the Association at any time.

Medical Economics Considerations in the Practice of Medicine.—Dr. Harvey Renger, Hallettsville, chairman of the Council on Medical Economics, discussed insurance in relation to a doctor's practice, insurance in relation to the doctor himself, and an explanation of charges, as the three aspects of the business side of a medical practice. He suggested that a physician know the limitations of policies and that he buy his insurance to suit his needs and no more; that is, his insurance should be designed to cover 75 per cent of his income. Dr. Renger stressed the importance of physicians' discussing fees with their patients.

Voluntary Prepayment Health Insurance.—Voluntary prepayment health insurance, an important instrument in the fight against socialized medicine, had its real beginning in 1929 at Baylor Hospital in Dallas with the medical-surgical plans being added approximately 10 years later, Dr. Roy T. Lester, Dallas, medical director of Blue Cross-Blue Shield of Texas, explained. Since then, many types of plans have been offered, varying from the limited to the catastrophic and major medical plans and growing with the needs of the people.

Before buying or recommending any particular plan, a doctor should study it, as well as the organization behind it. One should know how the organization operates, its reputation, if the plan is flexible, and its limitations. In the final analysis, Dr. Lester reminded, the prepayment plan can be effective only with the cooperation of the purchasers of the insurance and the providers of services covered by it.

Medical Ethics Considerations in the Practice of Medicine.—Although a new, briefer code of ethics has been adopted by the American Medical Association, the principles contained in the older lengthy code still pertain and the decisions relative to them which have been handed down by the AMA's Judicial Council still apply, Dr. Franklin W. Yeager, Corpus Christi, chairman of the Texas Medical Association's Board of Councilors, stated. Questions of ethics which arise should be handled first on a local basis with, if necessary, appeal to the Board of Councilors on the state level. Dr. Yeager pointed out that the Councilors act as an impartial body to judge a case on its merits, its purpose being to insure fair play, justice, and protection for both patient and doctor.

Dr. Yeager recommended three things to remember to avoid trouble with medical ethics: (1) to do everything for the good of the patient, (2) in dealing with the public to say nothing about a colleague unless it can be something good, and (3) to follow the golden rule. Any physician who needs advice as to the ethics of certain action may consult with the appropriate committee of his county medical society, write or call the Councilor of his district, or write the Board of Councilors.

Coffee is served in the reading room throughout the week-end activities.

Legislative Issues of Medical Interest in Congress and the State Legislature.—Bills of medical import are introduced in considerable number in both the Legislature and the Congress, and physicians individually have a responsibility to be informed about such measures and to express their opinions about them to their legislators. So Dr. G. W. Cleveland, Austin, chairman of the Council on Medical Jurisprudence, emphasized.

Currently proposed legislation of interest on the national scene is the Jenkins-Keogh bill which would give self employed persons tax deferment for payments into approved private pension plans. Passage of such a measure is the most effective means now available to prevent physicians from being swept into the social security system, which most Texas physicians consider to be unsound economically, contrary to the individualistic point of view, and probably impractical for a profession the members of which remain in practice long past the age at which social security benefits may be drawn if one's earnings are very small.

Workmen's Compensation Laws.—An understanding of the workmen's compensation law is of primary concern to the physician who cares for patients covered under it as well as to the insurance companies that write such insurance. The first workmen's compensation act was passed in Prussia in 1838; all states in the United States have adopted such acts since 1910, with Texas having a law before World War I, Smith Pettigrew, medical coordinator of Texas Employers Insurance Association, Dallas, related.

The Texas law provides benefits to an employee injured in the course of his employment, while furthering the interests of his employer, with the injury arising out of his employment. Coverage does not occur if the injured was intoxicated at the time of injury, if he was engaged in horseplay, if he willfully injured himself, or if an act of God caused the injury. The act is inoperative unless death, loss of a specific member of the body, loss of wages, or requirement of treatment is involved. When coverage under the act is extended to an employer by an insurer, the liability of the employer is shifted to the insurer. The insurer, however, is limited by the law to specific benefits, and all policies are in a standard, prescribed form.

A doctor is expected to render emergency treatment if necessary, notify the insuring company or the insured promptly of the seriousness of the injury and establish his authority to continue treatment, provide proper medical treatment to the end of getting the injured back to work, furnish a preliminary report to the insuring company within 8 days, render periodic reports as conditions change, and advise and confer with the insuring company if a specialist or consultant is needed, Mr. Pettigrew said. It would be wise for any doctor to become acquainted with the representatives of insuring companies in his area and to confer with them about compensation cases.

Legal Aspects of Your Practice: Malpractice and How to Avoid It.—Following the recommendations made in the booklet "Facts to Protect You and Your Patient," issued by the Council on Medical Defense of the Texas Medical Association, may help the physician avoid a malpractice suit, Philip R. Overton, Austin, general counsel of the Association, suggested. He emphasized the importance of keeping accurate notes and records and of obtaining written consent for operations and other procedures. He discussed the liability of the physician for acts of an associate or an employee, consultations, fees, the care and skill legally required of a specialist, and other problems arising frequently in malpractice problems, giving illustrations of malpractice.

Executive Council Hears Committee Reports

The Executive Council of the Texas Medical Association was called into session September 8 by Dr. Denton Kerr, Houston, President. Reports of the activities of councils and committees brought to the attention of the Executive Council the work that had been done during the year, and plans for the future. Most of the reports were accepted without further discussion. The following items were called to the attention of the Council:

Board of Trustees.—Complimentary copies of a directory of the Texas Medical Association, published by Blue Cross-Blue Shield of Texas, are being mailed to each doctor. The board mentioned the diligent work of the Texas State Board of Medical Examiners in enforcing the Medical Practice Act. The staff of the *Texas State Journal of Medicine* was congratulated on the *Journal's* being selected a winner in a mid-continent regional competition conducted by the International Council of Industrial Editors. Dr. Foy Moody, Corpus Christi, and Dr. James Hallmark, Fort Worth, were appointed to the Committee on Public Relations.

Board of Councilors.—It was suggested that a copy of the Legal Code of Ethics be furnished each county society, and the interprofessional code for the medical and legal professions was approved in principle. A resolution that influenza vaccine be administered according to the established doctor-pharmacist relationship, that no patient be denied vaccine because of economic distress, and that a committee be appointed to study the influenza problem, was adopted.

Executive Secretary.—The 1960 annual session will be in Fort Worth April 9-12, and the Hotel Texas will serve as headquarters. The Travis County Medical Society was thanked for its invitation, and was encouraged to invite the Association in 1962 when the State Legislature is not in session. A total of 7,620 memberships have been processed so far this year, and there are prospects for another 150 by December 31.

Woman's Auxiliary.—Mrs. H. S. Renshaw, President of the Woman's Auxiliary to the Association, said that this year the Auxiliary is emphasizing public relations, safety, nurse recruitment, and the American Medical Education Foundation. This year, she reminded, the Auxiliary will celebrate its fortieth birthday. Mrs. John D. Gleckler, Denison, President-Elect, pledged her support of the Association when she becomes President of the Auxiliary.

Council on Medical Defense.—The malpractice incidence in Texas appears to have declined, and the council hopes that through its efforts and that of the doctors in Texas, this trend will continue.

Committee on Nuclear and Atomic Medicine.—This new committee, which had its organizational meeting, proposed the appointment of district subcommittee in nuclear medicine, publication of a directory of nuclear consultants and availability of radioisotope electronic equipment for use by the profession in the event of emergency, and a central workshop on nuclear medicine. The committee reported that continuous education through the use of scientific papers, technical papers, personal contact and consultation, exhibits, and seminar-type programs will be a necessity.

Council on Medical Jurisprudence.—No action was taken after discussion of an amendment to Article III of the Texas Constitution to increase the maximum monthly payment to needy aged, blind, and children. The council recommended that physicians oppose the Old Age Assistance Act (to be voted on in November, 1958) to provide direct or vendor payments for medical care on behalf of such recipients. Active support of the Jenkins-Keogh bill was recommended.

Council on Scientific Work.—The council recommended the following changes for the 1958 annual session: (1) eliminate Wednesday from the annual session, (2) have a general meeting luncheon on Tuesday, (3) schedule the final meeting of the House of Delegates on Tuesday afternoon, and (4) end the annual session with the President's Party Tuesday evening.

Council on Medical Economics.—At a joint meeting with the Committee to Study Contract Medicine the two most prominent cases under investigation were discussed, and it was decided to continue active work in this program until relief has been granted. H.J.R. 36, "Vendor Medical Care," was discussed, and it was decided that if this constitutional amendment is passed, the Association should exert action to have this program developed on an indemnity basis. Also, it was recommended that accidental death and dismemberment insurance be offered to the membership of the Association. Charles O. Finley was instructed to present a major hospital expense program which for a reasonable sum will allow each member of the Association to insure his entire family for $10,000 per family member.

Medical Research Foundation of Texas.—Dr. F. J. L. Blasingame was invited to summarize the objectives and program of the Medical Research Foundation of Texas. He explained that funds which should be spent on research and education in this state have been channeled elsewhere because of the failure of Texas' medical and dental schools to have the proper support, facilities, and staff. He emphasized that if money could be provided for this initial sup-

port, it could be matched many times over by industries and foundations that are ready to make contributions to medical research. He pointed out that no intensive campaign for funds is under way, only a long-time, strong program. The foundation already has applications for $131,000 from Texas medical and dental schools with research projects they consider worthy, despite the fact that applications have been accepted only since June. The Executive Council voted approval of the foundation.

Council on Medical Education and Hospitals.—A report was heard on the progress that has been made in setting up a program in state hospitals and special schools similar to that outlined by Dr. Francis J. Gerty in his report on the mental health survey in Texas. The council complimented the Private Clinics and Hospitals Association on its continued progress in attempting to secure accreditation for its member hospitals and recommended that the Texas Medical Association support effort to secure a set of realistic minimum requirements for hospitals having 50 beds or less. Also, the council complimented the Woman's Auxiliary on the nurse recruitment program. The Postgraduate School of Medicine of the University of Texas was approved.

Council on Constitution and By-Laws.—The council is concerned about the current tendency to set up numerous standing committees to consider isolated problems which are related to spheres already encompassed by existing councils or committees. A standing Committee on Public Policy is being made possible through necessary By-Laws changes.

Committee on Aging.—It was recommended that each county society form a committee on aging for the purpose of studying the local problem of the aging population. It was particularly suggested that the committee interest itself with the custodial care and nursing homes. There are plans for merging of the Texas Geriatrics Society and the Gerontology Society to be the Texas Society on Aging, with the new group to meet twice annually.

AMA Delegates.—Dr. Milford O. Rouse, Dallas, on behalf of the Texas delegation to the American Medical Association, called attention to the report on AMA activities on pages 557-558 of the July *Journal.* He invited county societies or individual physicians to communicate with the delegates regarding matters they would like carried to the AMA, called attention to the 1959 clinical session of the AMA to be held in Dallas, and encouraged the almost 400 members of the Texas Medical Association who are not members of the AMA to join.

Rules Committee.—A Rules Committee created by the House of Delegates at the 1957 session to study means of streamlining and increasing the efficiency of the procedures of the House gave a progress report in which it was indicated that action would be requested subsequently on the following points: (1) limiting the length of all oral reports; (2) eliminating seconding speeches for General Practitioner of the Year nominees; (3) keeping supplementary reports to a minimum and limiting the length of oral presentations of all committee reports; (4) submitting resolutions in time for advance study and limiting the time for oral presentation; (5) limiting debate on a given topic by one delegate; (6) improving the procedures of reference committees and clarifying their oral reports.

Committee for Liaison with State Bar of Texas.—The committee recommended adoption of the interprofessional code of the State Medical Society of Wisconsin and the Wisconsin Bar Association as a model in Texas.

Committee on Cancer.—A conference on cancer care at the community level, to which the chairmen of county medical society cancer committees and personnel of tumor clinics will be invited, is planned for January. An American Cancer Society motion picture, "Time and Two Women," which deals with uterine and cervical cytology, was reviewed and approved with the opinion that it should be shown only with a physician present.

Committee on Medical History.—The committee has three projects in mind: a documentary colored, talking motion picture depicting the officers, committees, and functions of the Association, probably to be taken during the January Executive Council week end; written summaries of the important scientific and legislative matters that have occurred yearly since publication of Dr. P. I. Nixon's book covering the history of the Association up to 1953; publication in the *Journal* of historical articles of general interest.

Committee on Public Relations.—Attention was called to the availability of personal health information cards and family health record booklets for distribution to patients. Efforts to encourage county medical societies to participate in Medical Education Week next year were mentioned, as was a recommendation that a news release disseminate information about the Asian influenza situation.

Committee on Mental Health.—This committee has created subcommittees to deal with various aspects of its business. Favorable consideration was given to a project proposed by the Hogg Foundation for Mental Hygiene to study the problems of discharged or furloughed mental hospital patients. Recommended also that the Board for Texas State Hospitals and Special Schools be advised of the continuing wish of the Texas Medical Association to cooperate in planning for the treatment of patients and all that pertains thereto through a permanent planning and advisory committee as proposed in the Gerty report.

Committee on Blood Banks.—A resolution similar to that approved by the House of Delegates in the spring and urging that the Joint Blood Council be designated as the contracting agency for blood procurement with all governmental agencies was adopted by the House of Delegates of the AMA. Attention was called to two major problems arising with the increased use of blood in state hospitals: (1) donor responsibility on a replacement or monetary basis and (2) financial responsibility.

Committee for Liaison with Workmen's Compensation Insurance Companies.—The committee plans a campaign to inform physicians of all phases of the workmen's compensation laws of the state, using the *Journal,* a letter, and pamphlets.

Committee on School-Physician Relationships.—Plans are under way for a statewide conference on physicians and schools to be held January 7 and 8 under sponsorship of the committee, which emphasized the importance of attendance by a representative number of physicians. Also planned is a program of health education in the school system by means of motion pictures to be distributed by the Texas Medical Association's Memorial Library.

Committee on Rural Health and Doctor Distribution.—Dr. W. L. Wilson of the State Department of Health has reported 5 specific instances involving 34 human beings who have been helped because of the distribution of economic poisons kits and booklets by the Association. Attention was called to proposed distribution of planning guides for county health committees to be sent to county agents, city and county health officers, and county medical societies.

Committee on Cardiovascular Diseases.—The committee called attention to a page relating to information about cardiovascular conditions which is being printed each month in the advertising pages of the *Journal;* the page henceforth will be signed by both the Committee on Cardiovascular Diseases and the Texas Heart Association, which is financing the project. The speakers bureau sponsored by the committee is functioning, and several county societies already have taken advantage of the programs offered.

Committee for Study of Health Costs.—This committee's report said that critics accuse the medical profession of having

a negative attitude in the changing economic order, but that doctors had brought about voluntary prepayment health insurance, a great positive contribution. But the profession has not removed some of the obstacles in its path. On the basis of this, the committee recommended that (1) the Association create a grievance committee on the state level to which its members may refer disagreements with insurance carriers, (2) the Association prepare a schedule of usual fees as a guide to grievance committees, and (3) the Association seek to educate the people and the profession as to the advantages of health insurance by constructing two exhibits for use at appropriate times and places. There was general discussion from the floor, and it was pointed out that while a fee schedule eventually might be a good thing, such a step should be taken only after more thorough study than was possible at that time. Dr. F. W. Yeager, Corpus Christi, reminded that the Board of Councilors is authorized to act as a state grievance committee, with insurance companies or others having complaints against a physician having the privilege of going before a county grievance committee, district councilor, the Board of Councilors, and, if necessary, carrying the case to civil suit. He emphasized the value of personal contact between physicians and insurance representatives to iron out differences. He said that doctors are not bound by the fees authorized in the Medicare schedule in cases other than those dealing with the Medicare program. Dr. Mayo Tenery, Waxahachie, moved that the portion of the report relating to a fee schedule and creation of a state grievance committee be disapproved, and the motion carried.

Committee on Military and Veterans Affairs.—A proposed new Veterans Administration hospital was discussed, and the committee reported that any more veterans' hospital facilities at the present time would result in treatment of more non-service connected disabilities. Discussions with local groups on such matters should be tactful and educational in intent, pointing out that this is wasteful expenditure, that nurses and other workers are diverted from the community. It was recommended that the committee be authorized to study admission eligibility and develop factual information.

State Committee on American Medical Education Foundation.—Plans were presented for an annual fund drive November 1-30, and it was suggested that a "low-gear" continual campaign for national Medical Education Week and for lay contributions be developed.

Special Committee on Bracero Insurance and Medical Care.—Recommendations were that doctors not enter into agreement with insurance companies to care for braceros on a per capita basis, and that doctors have advance agreements with employers for insuring payment for medical services.

Upon completion of the reports, announcement was made of the next meeting of the Executive Council, January 19, with committees to be in session January 18.

GENERAL PRACTITIONER OF THE YEAR

Dr. Thomas Ford Bryan, Dublin, was honored as General Practitioner of the Year for Texas during the Texas Medical Association's third annual Public Relations Conference September 7 in Austin. He was presented with a bronze plaque by Dr. Howard O. Smith, Marlin, who was Councilor of Dr. Bryan's district at the time of his election, and with an honorary membership in Southern Medical Association and a golden anniversary key containing a diamond for each of his 10 years in the regional organization by Dr. Robert D. Moreton, Fort Worth, councilor for Southern Medical Association to Texas. Dr. Bryan has been a member of Southern Medical Association since January 15, 1915. He was chosen General Practitioner of the Year by the Texas Medical Association at its recent annual session in Dallas.

After introducing Mrs. Bryan, Dr. Smith presented the plaque to Dr. Bryan with this comment: "We see in him what we all want to be, a good doctor." Dr. Bryan said that if he were asked for advice from a young doctor, he would tell him to attend medical meetings. He has always attended as many medical meetings as possible and intends to continue this practice.

During his 57 years of medical practice, he has treated the sick and injured in times of war and peace, floods and famine, often under almost impossible circumstances. Born of a pioneer farm couple, Nicholas and Elizabeth (Ford) Bryan, on September 11, 1874, near Whitney, he had an early ambition to become a doctor. He moved with his family to Iredell when he was 4 years old, and attended public schools there. He studied two years at Baylor University, then entered the University of Texas Medical Branch, and was graduated in 1900. He took time out from his studies to serve as an enlisted man in the Army

DR. THOMAS F. BRYAN

Medical Corps during the Spanish American War, and was on active duty in Puerto Rico. His second tour of duty with the Army Medical Corps came during World War I, when he was commissioned as a captain.

After being graduated from medical school, Dr. Bryan began his internship at St. Mary's Infirmary, Galveston, and was there when the great flood and hurricane struck on September 8, 1900. He was marooned in the infirmary for several days, and worked around the clock to treat the injured. After completing his internship, he returned to Iredell and practiced six years, but moved in 1907 to Dublin, where he continues his active general practice. During his earlier years, he attended postgraduate courses in Chicago, New Orleans, and Los Angeles.

Dr. Bryan has been a member of the Texas and American Medical Associations through Erath-Hood-Somervell Counties Society for 50 years; he served his county group as secretary in 1934 and as president in 1930, 1931, and 1932. He was elected to honorary membership in the state organization in 1955. Dr. Bryan also is a member of the Southern Medical Association, Texas Academy of General Practice, and American Academy of General Practice, and is local surgeon for the Missouri, Kansas, and Texas and Santa

Fe railroads. He was one of the leaders in the organization and establishment of the Dublin Hospital built in 1947 and financed through the sale of stocks. Besides his keen interest in medicine, Dr. Bryan maintains an active part in civic affairs. He has been a member of the Baptist Church for 65 years, a member of the Masonic Lodge for more than 50 years, and a Shriner for 30 years. He is a charter member and past president of the Dublin Development Club, which was organized in 1921. He also is a member of Rotary International. His friends say of him, "He has the rare faculty of being able to take a firm stand on any issue in his community without incurring the criticism and ill will of his colleagues."

Dr. Bryan was married in 1903 to Miss Ora May Lane; she died in 1913. In 1929, he married Miss Anise Harber. They have no children. Dr. and Mrs. Bryan enjoy travel and have attended many medical meetings. Dr. Bryan counts fishing among his special interests.

In seconding the nomination of Dr. Bryan, Dr. G. V. Brindley, Temple, said, "He is a Christian gentleman who has been active in civic and religious affairs of his community. He has done much for the people where he has lived. He has the right conception of medicine, and the Texas Medical Association will honor itself in electing him as the General Practitioner of the Year."

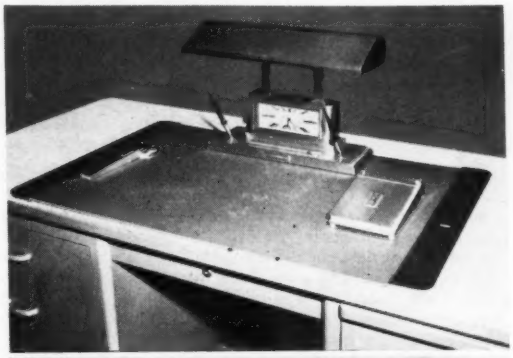
"HONOUR A PHYSICIAN . . ."

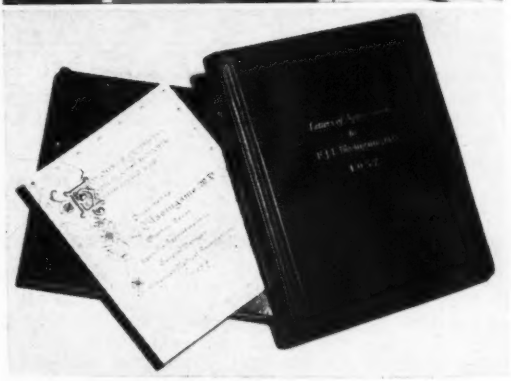
Dr. F. J. L. Blasingame, Wharton, in special ceremonies in Austin September 7, was paid tribute by the Texas Medical Association on his appointment, effective January 1, as General Manager of the American Medical Association.

Making the introduction and presenting gifts from the Association was Dr. Milford O. Rouse, Dallas, chairman of Texas delegates to the AMA. He told some of the more serious accomplishments of Dr. Blasingame, but mentioned human incidents from his career which, though humorous, reflected the splendid character and worthy accomplishments of the man. In part, he said, "By innate ability and sheer hard work 'Bing' Blasingame has demonstrated that even in a smaller city can be gathered a group of competent physicians and surgeons to render medical, surgical, and hospital care equal to that of any larger medical center. By many years of faithful work with private patients, he has acquired a viewpoint of a practitioner of medicine that he will never lose."

Following Dr. Rouse's tribute, Dr. Denton Kerr, President of the Association and a former vice-president of the Southern Medical Association, presented Dr. Blasingame with a golden anniversary key from SMA in recognition of his contributions to medicine in the south and in honor of his new appointment.

Dr. and Mrs. Blasingame with four of their five children. John Chester, Betty Nan, and Mary Lillian are in the foreground, and Rebecca Louise is on the arm of her father's chair.





The desk set presented to Dr. Blasingame is above; below, the letter case shows the title page.

Dr. Rouse then unveiled a desk set given to Dr. Blasingame by the State Association in appreciation of his outstanding leadership, and handed Dr. Blasingame a specially made booklike letter case with a hand illuminated title page. Dr. Rouse read the quotation on this page from Ecclesiasticus 38:1, "Honour a physician with the honour due unto him." The case was filled with personal letters written to Dr. Blasingame as he accepts his new office. Others who wish to send letters for this keepsake were invited to do so.

Below are excerpts from some of the letters:

> . . . You have amazed me at the wealth of knowledge and information that you have and which you so willingly impart to others.
>
> . . . I think it is a question as to whether you or the American Medical Association should be congratulated. May your arm be strong and the Lord hold your hands.

. . . if I had to pick one characteristic of F. J. L. Blasingame that best pictured him as a man and as a doctor, I'd repeat what I have said to many people. "He takes his turn on first and second call no matter how much he's gone during the month."

. . . While I have not always agreed with you, you have always had my complete respect and no person has ever, properly, questioned your integrity and intentions.

. . . In my humble opinion, the next 10 years are most vital in our good country, and I am so thankful that the man of greatest responsibility and influence in Medicine, Dr. Bing Blasingame, is a man who is truly conservative and yet most practical, with the ability to get the job done. I want to express my personal appreciation to your good wife of her willingness for you to render service.

. . . Texas is losing one of its best citizens and a natural leader of men,—sincere, honest, unselfish, and able. We shall all miss Dr. F. J. L. Blasingame.

Dr. Blasingame responded in an extemporaneous recital of appreciation to his family, clinic associates, and professional colleagues throughout the state who have helped make possible his attainments. He explained the difficulty he had encountered in making the choice to leave Texas for a new post in Chicago. He stressed the many significant opportunities the American Medical Association has to lead the medical profession into a still brighter future, but underlined the necessity of dreaming dreams and making plans for 10, 20, or more years ahead and of drawing into the part-time voluntary workers and the full-time employed staff of the AMA the finest minds and greatest experience that can be obtained. He expressed his gratitude to the Texas Medical Association for its support of and interest in him and for the expressions of affection given to him that day.

★ County Societies

Community Clinics And the County Society

Community clinics may serve multiple purposes. For the medically indigent, such clinics may provide diagnostic and treatment aid. For persons unlettered in the complexities of how to stay well and how to deal with newly acquired chronic illness, a clinic may be a source of education and training. For the physician, a clinic may be a means of becoming better acquainted with certain diseases and an outlet for humanitarian service. For a county medical society, participation in a clinic may offer excellent opportunities for building good will.

Reports from secretaries of county medical societies in Texas indicate that in communities with fairly large populations, several types of clinics can be organized to advantage; in smaller communities, lack of staff and facilities necessitates less extensive projects. Several county medical societies actively cooperate with such clinics and usually help staff them, but in most instances, cities, state, hospitals, or other associations actually initiate, finance, and sponsor them.

Ellis, Tom Green-Eight, and *Cameron-Willacy Counties Societies* sponsor clinics financed by their cities and city-county-state welfare units. In Ellis County, a well baby clinic for two orphans' homes is operated, and routine immunizations are given. Also, indigents may receive medications, and some serologic work is done. The clinic is open 5½ days a week; the city-county nurse is a full time staff member, and doctors help when needed. Between 100 and 125 patients are handled monthly.

The maternity and well baby clinics held 2 hours weekly in Sinton, Ingleside, and Mathis are not for medical care, but are for diagnosis and education of patients. Local physicians, members of the *San Patricio-Aransas-Refugio Counties Medical Society,* staff the clinics, and only the indigent are seen. The county health unit co-sponsors the program, and it is financed through the state. About 78 patients are seen each month. For about 5 years, a well baby clinic has been handled in *Brown-San Saba-Comanche-Mills Counties* at the local health center, and 4 members of the county medical society rotate working each Thursday. Indigent patients are eligible for medical care. Although the people know that the clinic is available for them, say the doctors, they do not know what types of cases it is equipped to handle, but their opinion is that the clinic has been a valuable aid in educating the public.

A crippled children's clinic, which is open by appointment, is operating in *Cherokee County,* and is the result of close cooperation between the county medical society and the local Lions Club. It has been established about a year, and the medically indigent are eligible for care. Both children and parents are trained, and specific treatment is given in each case; 159 patients are registered. The society anticipates that a well baby clinic soon will be started.

Hill County Society sponsors a crippled children's therapy center, which is directed by the county nurse.

Tumor and heart clinics are open one or two times a month for residents of *Kerr, Kendall, Gillespie,* and *Bandera Counties.* These are held in local hospitals, and primarily are for medical care, diagnosis, and education of the physicians. Kerrville doctors hold a group consultation with specialists from San Antonio, and this program is sponsored jointly by the medical society and the Peterson Foundation, Tuberculosis Association, and Community Chest, with additional support from individual donations. About 20 patients are handled monthly, and anyone is eligible as a patient.

Johnson County Society, in cooperation with the local Tuberculosis Association, sponsors a tuberculosis clinic.

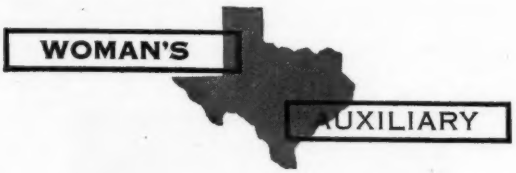
McLennan County Society sponsors heart, tumor, and well baby clinics which have been in operation for the past 10 years, and about a third of the members of the society help staff the clinics on specified days. Both the city-county health unit and Providence Hospital help with the clinics, and any patient recommended by a doctor is eligible. The clinics are well used by the people of the area, say the doctors, and generally, they know what types of cases are handled and do not expect more assistance than is available.

In *Dallas,* tumor, heart, well baby, and tuberculosis clinics as well as others have been in operation for many years; they are held at hospitals and other available locations, and are sponsored jointly with hospitals, city, state, or other groups. Several hundred Dallas doctors participate, and the medically indigent are accepted as patients.

Bosque, Bexar, and *Hidalgo-Starr Counties Medical Societies* report that although they do not actually sponsor such clinics, there is definite cooperation with other groups in this type of work. Dr. Van D. Goodall, Clifton, secretary of the *Bosque County Society,* says, "We consider Bosque too small for community clinics, but the society does sponsor and cooperate with such county fund drives as tuberculosis, heart, poliomyelitis, and so forth." *Bexar County Society* endorses various clinics in the San Antonio area, and many doctors participate, but the society as a group does not sponsor any of them. In *Hidalgo-Starr Counties,* the doctors in each town cooperate in well baby clinics sponsored by public health departments. In McAllen, the clinic is open Monday, Wednesday, and Friday mornings, and doctors rotate calls. Eligibility of patients is based on monthly income. The clinic is financed from the United Fund.

Harrison County Society Participates in Local Fair

"Alcohol and the Human Body," a three-dimensional exhibit, was one of the displays shown by the Harrison County Medical Society during the Central East Texas Fair in Marshall early in September. This exhibit is on permanent display at the Dallas Health Museum, and never had been loaned before. Another display at the fair was on mental health, and members of the Woman's Auxiliary to the Harrison County Medical Society staffed the exhibit and information booth, which was in the Commercial Exhibit Building.



Auxiliary's Share in Science Fairs

September, to auxiliaries to county medical societies across Texas, means "Time to Get Busy on Science Fairs."

Some auxiliaries will be sponsoring science fairs for the first time this year. Others will be working on an already established program. But whether a local auxiliary's job is to increase its community's awareness of the value of annual science fairs or to arouse enough enthusiasm to launch such a program, it is a big and important job.

Local auxiliaries which want or need help in learning how to go about sponsoring a local science fair can get it from the specially appointed Science Fair Committee which is headed by Mrs. William D. Nicholson, Freeport, Chairman, and Mrs. Elmer Heimbigner, Lake Jackson, Co-Chairman. Other members of the committee are Mrs. James N. White, San Angelo; Mrs. C. Keith Barnes, Fort Worth; Mrs. L. C. Heare, Port Arthur; and Mrs. W. G. Robertson, Jr., Luling.

Aside from its main objective, which is, of course, to encourage young people to take an active interest in science, the sponsorship of science fairs gives county auxiliaries a splendid opportunity to work with schools, newspapers, chambers of commerce, and local service organizations on a worthwhile youth project.

When a local auxiliary takes the attitude, "We want to help in every way we can to make the science fair a success," it is putting across the idea that the auxiliary isn't out for its own glory, that it isn't trying to grab any credit, but that all it wants is to lend a helping hand in an important community project.

When doctors' wives are willing to pool their efforts with members of other organizations, they also are doing a splendid job of public relations, because the best public relations come as a result of service.

Another sidelight on the value of this rather new auxiliary project is that a science fair is possible in even the smaller communities.

Where there is even one high school there is an opportunity for launching a science fair. Where there is even one high school there are bound to be students whose spark of interest in science should be encouraged to burn more brightly.

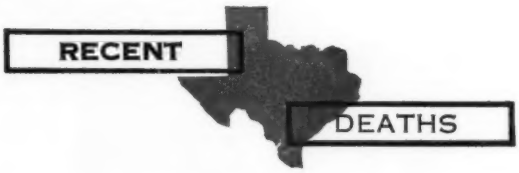
And a winner in the National Science Fair can come from anywhere. Texas took its share of honors at the last national fair; its young scientists took one second place award and four fourth place awards. The 1958 national showing will be in Flint, Mich., May 7-10.

But those who place in the National Science Fair aren't the only winners. Any boy or girl who takes part in a science fair on even a local level wins a sense of accomplishment for a project completed, valuable experience in presenting his work and his ideas to others, and the strengthening knowledge that the adults of his community are backing his interest in science.

That is quite a lot for any youngster to win and quite a lot for any auxiliary—by its sponsorship of a local science fair—to help him win.

—MRS. FREDERICK C. LOWRY, Austin.

Officers of the Woman's Auxiliary to the Texas Medical Association for 1957-1958: President, Mrs. Horace S. Renshaw, Fort Worth; President-Elect, Mrs. John D. Gleckler, Denison; First Vice-President, Mrs. John H. Wootters, Houston; Second Vice-President, Mrs. J. C. Terrell, Stephenville; Third Vice-President, Mrs. Richard L. Hudson, Corpus Christi; Fourth Vice-President, Mrs. H. O. Padgett, Marshall; Fifth Vice-President, Mrs. O. N. Mayo, Brownwood; Treasurer, Mrs. William C. Barksdale, Borger; Recording Secretary, Mrs. Harold Lindley, Pecos; Corresponding Secretary, Mrs. J. Franklin Campbell, Fort Worth; Publicity Secretary, Mrs. F. C. Lowry, Austin; Parliamentarian, Mrs. Ramsay H. Moore, Dallas; Executive Secretary, Miss Hazel Casler, Austin.



DR. W. H. BEAZLEY

Dr. William Herbert Beazley, Baytown, Texas, died July 11, 1957, of myocardial infarction and coronary artery thrombosis.

He was born April 7, 1884, in LaPorte, and was the son of John and Mary Emily (McMillian) Beazley. After being graduated from LaPorte High School, he studied at the Kentucky School of Pharmacy, Louisville, Ky., then entered the University of Louisville School of Medicine. He received his doctor of medicine degree in 1912, and interned at Lunn's Sanitarium, Houston. He also spent some time in the Charity Hospitals of New Orleans and Shreveport. Dr. Beazley was located in New Caney, Humble, Diboll, Austin, Honey Island, and Houston before settling in Silsbee in 1929. He practiced there until 1947, when he retired and moved to Baytown. While in Austin, Dr. Beazley was state health officer.

He was a member of the Texas and American Medical Associations consecutively through the Polk, Angelina, Harris, Jefferson, and Hardin-Tyler Counties Medical Societies, and served the latter group as president in 1938 and secretary in 1946 and 1947. He was chairman of the board of trustees of the Silsbee Independent School district for 17 years, and was a member of the Masonic Lodge, Kiwanis Club, and Methodist Church.

Miss Mattie Dee Lacy and Dr. Beazley were married July 21, 1916, in Houston. Mrs. Beazley survives, as do a

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

brother, Hamilton Beazley, and four sisters, Mrs. Mary Gaillard, Mrs. Lucy Modesett, Miss Julia Beazley, and Miss Rosadelle Beazley, all of Houston.

DR. HARRY FARBER

Dr. Harry Farber, Denton, Texas, died of coronary occlusion June 15, 1957, while vacationing with his family in Laguna Beach, Calif.

Dr. Farber was born on December 25, 1910, in New York City, and was the son of Isidore and Ida (Eiss) Farber. He attended Boys High School, Brooklyn, and received a bachelor of science degree from New York University in 1930. In 1935, he was graduated from the Royal College of Physicians and Surgeons, Edinburgh and Glasgow, Scotland. Dr. Farber interned in Metropolitan Hospital, New York, then spent one year as a resident surgeon there. He was chief resident at West Side Hospital, New York, two years. He then began private medical practice, became an instructor at New York Medical College, and taught clinical surgery and experimental surgery (on dogs) one year each. In 1941, he joined the Army Medical Corps and attained the rank of major. He spent 27 months in the Pacific, and was stationed at Tripler General Hospital, Honolulu, during the attack on Pearl Harbor. He was awarded a combat medical insignia for his service during the campaign in the central Solomon Islands. He spent a total of 5½ years in the armed forces.

Dr. Farber moved in 1946 to Denton, where he was in general practice and gave special attention to surgery and fractures.

DR. HARRY FARBER

He was a member of the Texas and American Medical Associations through the Denton County Medical Society, of which he was president in 1951.

He enjoyed horticulture, and raised tropical plants as a hobby.

Dr. Farber was married November 16, 1944, in Denton to Miss Lazelle Hohenstein.

Survivors include Mrs. Farber and two daughters, Penelope and Erica, all of Denton; two brothers, Murray Farber, Brooklyn, and Herman Farber, Los Angeles; and a sister, Mrs. Sylvia Janof, Brooklyn.

DR. OTIS W. LITTLE

Dr. Otis Williamson Little, Abilene, Texas, died in a local hospital March 10, 1957, of hypostatic pneumonia and bronchiectasis.

He was born November 6, 1879, in Putnam, Ala.; his parents were Edmund and Katherine (Orr) Little. After attending public schools in Putnam and studying with private instructors, he entered the Medical Department of the University of Louisville, Louisville, Ky., from which he was graduated in 1911. Beginning his medical practice in Alabama, he waited 6 years before taking an Army internship; he served with the Army Medical Corps from 1917 until 1927 and was a captain. He spent 2 years in the Philippine Islands, and returned to practice in Tuscola, Texas. He spent brief periods in Bridgeport and Decatur. In 1933, he moved to Abilene, where he was in active practice until the time of his death.

DR. OTIS W. LITTLE

He was a member of the Texas and American Medical Associations through the Taylor-Jones Counties Medical Society, and also was a member of the Southern Medical Association, Phi Beta Pi medical fraternity, and Chamber of Commerce. He had been chairman of the staffs of both Hendrick Memorial and St. Ann Hospitals in Abilene and was head of the local induction center during World War II.

On August 21, 1929, Miss Maude Skinner, formerly of Gonzales, and Dr. Little were married in Dallas. She survives, as does a daughter, Mrs. Gilbert Taylor, both of Abilene.

DR. HOWARD A. ROSS

Dr. Howard Albertus Ross died June 26, 1957, in Longview, Texas, where he had been in general practice 28 years until his retirement 6 years ago.

He was born in Clayton, on January 22, 1880, and was the son of Arthur Brown and Sarah Jane (Davis) Ross. He attended public schools and the Hewett Institute of Beckville, and was graduated from the University of Texas Medical Branch, Galveston, in 1909. He was vice-president of his senior class. He practiced 3 years in Clayton and 9 years in Carthage before moving to Longview.

Dr. Ross was a member of the Texas and American Med-

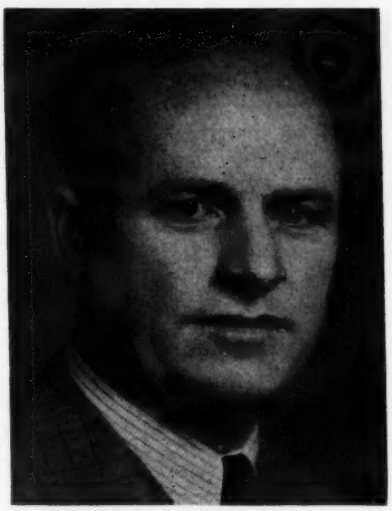
ical Associations through the Panola or Gregg Counties Medical Societies and was a past president of both groups. He also was a member and past vice-president of the Tri-State Medical Society. He was health officer in Panola County and in Carthage, a member of the Carthage and Longview school boards for 20 years, and a board member of the First Christian Churches in both cities. He was a member of Rotary International, Knights of Pythias, Elk's Club, and the Pinecrest Country Club.

Miss Manola Beatrice Duke and Dr. Ross were married in Clayton on December 21, 1902. She survives, as do three children, Miss Alvie Louise Ross, Howard Randall Ross, and Joseph Carl Ross, and two grandchildren, all of Longview.

DR. BRYANT O. BAKER

Dr. Bryant Orland Baker, Dallas, Texas, died July 24, 1957.

Born November 20, 1900, in Mineral Wells, he was the son of John T. and Timmie Inez (Herring) Baker. He received his early education in rural schools near Mineral



DR. BRYANT O. BAKER

Wells, then earned a bachelor of science degree from West Texas State Teachers College, Canyon, in 1925. In 1930, he received his master of arts degree from Kansas University, Lawrence. He was graduated from Baylor University College of Medicine in 1938, and interned at Parkland Hospital, Dallas, for one year. He held assistantships in undergraduate, graduate, and medical schools. Later, he took several short postgraduate courses. Before entering medical school Dr. Baker taught for 10 years, first in Mineral Wells High School and then at Southwest Texas State College in San Marcos.

Dr. Baker began practicing in Dallas in 1939 and was active there throughout his career except for about 2 years in the early forties spent in Comanche.

He was a member of the Texas and American Medical Associations through the Dallas County Medical Society, and also was a member of the Dallas, Texas, and American Academies of General Practice. He was a life member of the Texas State Teachers Association. He was a Baptist, and his hobbies were photography and work in his yard.

Miss Esther Sue Cavitt and Dr. Baker were married June 3, 1928, in Red Oak; survivors other than Mrs. Baker include a son, Bryant Orland Baker, Jr., Dallas; four brothers, Dr. James O. Baker and Dr. John O. Baker, Dallas; Henry M. Baker, Childress; and J. C. Baker, Lufkin; and four sisters, Mrs. Mary Opal Quinn and Mrs. Inez Ludden, Dallas; Mrs. Hortense Boedeker, Lubbock; and Mrs. Martha King, Plainview.

DR. M. B. BREATH

Dr. Marshall Burt Breath, San Antonio, Texas, died of coronary occlusion July 15, 1957.

He was the son of Dr. Walter Parry and Birdie (McCutcheon) Breath, and was born November 12, 1915, in Galveston, where his father practiced ophthalmology. After attending public schools there, he entered New Mexico Military Institute, Roswell, from which he was graduated in 1934. He received his bachelor of arts degree from the University of Texas, Austin, in 1936, then entered the University of Texas School of Medicine, Galveston, where he completed his studies in 1940. He interned at the City Hospital, Winston-Salem, N. C., and after a tour of military duty spent two years in residency in internal medicine at the University of Texas School of Medicine, Galveston.

In 1948, Dr. Breath began his private practice in San Antonio, specializing in internal medicine. He remained there until 1955, when he practiced briefly in Corpus Christi and in Pikeville, Ky., and returned to San Antonio in 1956.

DR. M. B. BREATH

Dr. Breath was a member of the Texas and American Medical Associations through the Bexar or Nueces Counties Medical Societies. A diplomate of the American Board of Internal Medicine, he also was a member of the Texas and American Heart Associations, Phi Rho Sigma medical fraternity, Phi Gamma Delta social fraternity, American Legion, and the Episcopal Church. During World War II, he served 5 years in the Army Medical Corps, and was awarded the Bronze Star and the Purple Heart, being wounded in the Battle of the Bulge.

He enjoyed fishing and music.

On November 23, 1954, Emma Laroe Huntress and Dr. Breath were married in San Antonio. Mrs. Breath survives, as does one brother, W. M. Breath, Corpus Christi.

DR. CARL W. SHIRLEY

Dr. Carl Wilson Shirley, Houston, Texas, died July 25, 1957.

Son of E. D. and Sally (Hutto) Shirley, he was born February 21, 1898, in Marble Falls, and attended public schools in Llano. After being graduated from the University of Texas, Austin, in 1921, he entered the University of Texas Medical Branch, Galveston, and received his doctor of medicine degree in 1925. He interned at John Sealy Hospital, Galveston, and was a resident in urology at Trenton State Hospital, Trenton, N. J., and the Jersey City Hospital, Jersey City, N. J., for a year each. Dr. Shirley began practicing urology in Houston in 1929, and continued until the time of his death.

DR. CARL W. SHIRLEY

He was a member of the Texas Medical Association, American Medical Association, and Harris County Medical Society, and during World War II he was in the Navy and served in San Diego, Guam, and Corona, Calif. He was retired in 1946 with the rank of captain.

Dr. Shirley and Miss Kathryn Cochran were married May 21, 1932, in Houston. Survivors other than Mrs. Shirley are two sons, Carl W. Shirley, Jr., and Robert B. Shirley, both of Houston, and a brother, M. D. Shirley, Brownwood.

DR. ALFRED S. OSBORN

Dr. Alfred Shaffer Osborn, McAllen, Texas, died of accidental electric shock July 7, 1957.

He was born July 13, 1911, in McAllen; his parents were Frank Ely and Cora Elizabeth (Shaffer) Osborn. After receiving his preliminary education in public schools, he attended Schreiner Institute in Kerrville, and entered the University of Texas, Austin, in 1928. He received his bachelor of arts degree in 1934, and at the same time was graduated from the University of Texas Medical Branch, Galveston. Dr. Osborn interned 2 years at Jefferson Davis Hospital, Houston, and was resident physician at Memorial Hospital, Houston, for a brief period. He then spent 7½ months in residency at the Turner Urological Institute, Houston. In 1937, he began his general practice in McAllen, where he remained until the time of his death.

Dr. Osborn was a member of the Texas and American Medical Associations through the Hidalgo-Starr Counties Medical Society for 20 years, and served as secretary of his society in 1942 and 1943 and as president in 1945. He also was a member of the Presbyterian Church and was an honorary member of the volunteer fire department.

Miss Elsie Bert Reagan, a registered nurse, and Dr. Osborn were married July 10, 1937, in Houston. Survivors include Mrs. Osborn; a son, Alfred S. Osborn, Jr.; his parents, Dr. and Mrs. Frank E. Osborn; and two brothers, Frank Ely Osborn, Jr. and Dr. Robert Wallace Osborn, all of McAllen.

DR. WILLIAM EHRHARDT

Dr. William Ehrhardt, general practitioner in Bammel, Texas, for 57 years, died in a local hospital August 15, 1957, of complications which developed after a fall.

He was born November 14, 1872, in Bammel, and his parents were David and Elizabeth (Klein) Ehrhardt. After attending public schools in Bammel, he attended Baylor University, Dallas, and Southwestern University, Georgetown. He studied at the University of Texas Medical Branch, Galveston, but was graduated in 1900 from the Tulane University of Louisiana School of Medicine. Later, he returned to Tulane for three years of postgraduate training.

DR. WILLIAM EHRHARDT

Dr. Ehrhardt began practicing in his home town, and with the exception of four months spent as a physician for La Mina Saragosa, San Leon, Mexico, he remained in Bammel until his retirement.

He was elected to honorary membership in the Texas Medical Association in 1951 after having been a member through the Harris County Medical Society since 1909. He also was a member of the American Medical Association, Kappa Sigma social fraternity, and the Methodist Church. He raised honey bees and trees, and was interested in mining stocks.

He is survived by three sisters, Mrs. Mary Tautenhahn, Westfield; Mrs. Annie Cramer, Houston; and Mrs. Elizabeth Robinson, Spring.